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**The Appropriation and Mastery of Cultural Tools in
Computer Supported Collaborative Literacy Practices**

Juan Manuel Fernández Cárdenas

BSc Hons

A thesis submitted to The Open University in fulfilment of the
requirements for the degree of Doctor of Philosophy

Faculty of Education and Language Studies

June 2004



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ABSTRACT

The main focus of this thesis is how language is used to construct knowledge in social interaction. A more specific aim is the investigation of the strategies of British primary school children for constructing multimodal electronic documents, and in particular for constructing collaboratively WebPages in History.

In the first part of the thesis the two themes are critically explored through a literature review of sociocultural theory, literacy, and ICT, and through two pilot studies. In the first study, I investigate how language use varies according to the difficulty of tasks. In the second study, I investigate how language use in situated literacy events relates to wider cultural practices for constructing e-mails and WebPages. Drawing on the result of these studies, I evaluate the relationship between the concepts of Zone of Proximal Development, scaffolding, exploratory talk, and Intermental Development Zone (IDZ), arguing in favour of the usefulness of IDZ for studies in social interaction.

In the second part of the thesis, I explore different approaches to discourse analysis developing an analytic strategy for the main study. I identify the ethnography of communication as a starting point, choosing the 'communicative event' as the unit of analysis to investigate, using NVivo: how participants construct categories of meaning while constructing WebPages in History, and the categories of participants in relation to the activity frames of design, History, and group work. I conclude that, in contrast to a view of "effective use of language" linked to explicitness, participants demonstrated to be communicatively competent in managing deictic terms and intertextual references, recognizing cultural patterns, and adjusting their efforts according to a division of labour, and the collaborative nature of meaning making. Finally, the notion of 'situated activity system' is enriched by illuminating how categories of participants, activity frames, and cultural tools are interrelated in such system.

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“Visible things can be invisible. If somebody is riding a horse through the woods, at first you see them and then you don’t. But you know they’re there. In “Le Blanc-Seing” the rider hides the trees, and the trees hide her. However, our intellect comprehends both things, the visible and the invisible. I make use of painting to render thoughts visible”. Magritte, 1965.

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KEY TO TRANSCRIPTIONS

Several of the chapters present sequences of dialogue, together with contextual information in parenthesis concerning what the speakers were doing. All the names of participants have been altered to protect their identity. The transcripts have been presented as readably as possible with the following transcript conventions, adapted from Edwards and Mercer (1987).

(...) Words undeciphered

. Omitted discourse which is irrelevant to the issue being discussed

... Sequence starts or ends within a speaker's turn

/ Pause of less than 2 seconds

// Pause of greater than 2 seconds

underlined Emphatic speech

[Simultaneous or interrupted speech

CHAPTER 1. INTRODUCTION

1.1 Motivation of this Thesis

The general interest of this dissertation is to explore the ways in which participants construct knowledge in social interaction. Following a sociocultural approach to cognition and communication, the main claim of this dissertation is that knowledge is not a static entity stored in the head of participants, but a social construction that is negotiated in situated actions. As a result, language takes a predominant position as a tool mediating this construction. In this respect, the concepts of Zone of Proximal Development (ZPD), 'scaffolding', exploratory talk, and Intermental Development Zone (IDZ) are examined and elaborated in relation to group work carried out by pupils in small groups.

Although these concepts have proved to be useful for educational research, the way in which they have interpreted the sociocultural nature of situated actions and language use has also been challenged by several authors (e.g. Daniels, 2001; Engeström, Miettinen, & Punamaki, 1999; Maybin, 2003b; Wertsch, 1991, 1998) claiming that the complexity of context, and the nature of culture require further theorisation and improved methodologies. Thus, they have called for an elaboration of these concepts focusing on the conditions of production of situated actions both at a social and a societal level, as part of studies oriented to the understanding of the perspective of participants; in contrast to cognitive approaches which traditionally privilege an abstract account of reality from the point of view of the researcher. In this respect, one way in which I address these issues is by studying linguistic variability in situated actions, and in particular, the variations of the use of language according to the degree of difficulty of the Raven's Standard Progressive Matrices (RSPM) test that students solve in small

groups. Another approach that I develop for investigating the strategies of participants using language is the study of the collaborative construction of a range of electronic documents by British primary school children. In this respect, I draw on the ethnography of communication, and in particular, on the notion of communicative event as a unit of analysis to document the variety of these events and the ways in which participants make sense of their own actions using language in social interaction. More specifically, I study the relationship between situated events and cultural practices in relation to the construction of e-mails and WebPages in the pilot study, and then in the main study I focus on the documentation of the construction of WebPages in History by primary school children. Thus, I develop a methodology drawing on a range of other discursive analytic strategies and ethnographic tools to map how participants negotiate meaning in communicative events, as well as documenting the specific categories that participants construct in relation to specific activity frames, within a given situated activity system.

1.2 Evolution of the Research Question(s)

This research began with the very general question of **“How is language used in social interaction to construct knowledge?”**. As this is a question that admits many different answers according to the perspective taken in the research design, initially I operationalised this question in a rather limited way, trying to find a fourth type of talk in addition to the three types of talk documented by Mercer and Wegerif (e.g. Mercer, 1995; Wegerif & Mercer, 2000) in relation to the dialogical orientations of participants in group work. In this respect, I strived for a while with the research question of **“What is the best type of talk for constructing WebPages?”**, trying to arrive to a type of talk such as “creative talk” or “compositional talk”. Nevertheless, as I started to pursue this, on the one hand I realised that in a basic sense, any use of language is creative, and on

the other hand the tasks in which language is used in interaction are practically infinite, so that labelling each of them as a type of talk was not leading me to any concrete classification system that I could handle. However, this exercise was useful in the sense that it led me to seek an approach that could account for the study of language acknowledging the diversity of social goals in which participants are engaged, and thus, I found the ethnography of communication to be a useful starting point. In addition, following this approach I decided to return to a more general level of operationalisation of my research interests, although situated in a more specific task with the question **“How do participants negotiate meaning while constructing a WebPage in History?”**. By pursuing this question, I could identify the role of deictic terms in the relationship between language and context, the existence of cultural patterns, the emergence of division of labour and the intrinsic collaborative nature of the use of language for constructing meaning as features of communicative events that need to be mastered by students to be communicative competent. In addition, I did not only try to find out the mechanics of conversation in literacy events, but also the ‘content’ of such conversations as indicators of what was going on in the practice of constructing WebPages. Therefore, I also pursued the question **“What are the categories of participants in relation to the activity frames of design, History, and group work?”**. As a result, I found that language in use is a multilayered arrangement of meanings simultaneously being constructed in social interaction, which are only intelligible in relation to the existence of activity frames within a situated activity system, which in turn represent the conditions of production that I was referring to at the beginning of this introduction.

1.3 Overview of the Thesis

In **Chapter 2**, I discuss the main issues involved in the impact of ICT in education, literacy, and the construction of electronic multimodal documents. I argue for an approach suitable for documenting the relationship between mind, language, context, tools and culture in situated literacy events. Thus, I describe in detail the main principles of sociocultural theory, and a situated approach to the study of mind. Finally, I discuss two possible approaches to the study of literacy, as a set of decontextualised skills, or as a contextualised cultural practice.

In **Chapter 3**, drawing on the review of sociocultural theory, and taking the perspective of studying literacy as a cultural practice, I present two pilot studies, looking at the way language in use varied according to the nature of the task. One study is about the strategies displayed by children in solving the matrices of the RSPM test. The other study is about the way language is used for constructing a range of electronic documents, and in particular e-mails and WebPages, problematising the relationship between literacy events and practices. In addition, I present a discussion of how the concepts of ZPD, 'scaffolding', exploratory talk, and the IDZ are interrelated, arguing for the use of the latter term as a more descriptive and inclusive concept for studying how language is used in social interaction for pursuing goals and constructing shared understandings based on the existence of a dynamic contextual framework.

In **Chapter 4**, trying to expand the ways in which the nature of the IDZ can be studied and assessed, I discuss the different approaches to sociolinguistics and discourse analysis. The focus is on finding tools within ethnomethodology, Conversation Analysis, Discursive Psychology, Systemic Functional Linguistics, ethnography of communication, Critical Discourse Analysis, and Interactional Sociolinguistics, in order to investigate how participants make sense of their own actions in situated events. The

review is intended to find a way to define a suitable unit of analysis to investigate the participants' perspective in literacy events, as well as defining methods for analysing how participants construct meaning in interaction addressing the existence of social and societal conditions of production in the way they use language for constructing WebPages in History.

In **Chapter 5**, I present the characteristics of the main study, explaining the history and design of the project, which took place in a primary school in Milton Keynes, UK. I describe in detail who were the participants, the cultural tools comprising the situated activity system, the data collected, and the results in terms of communicative events – the unit of analysis chosen, following the ethnography of communication. Finally, I explain the analytical procedure that I apply to the communicative events I found, by exploring the relationship between communicative events, acts and situations in Chapters 6, 8, 9, and 10.

In **Chapter 6**, I discuss four aspects that need to be mastered by students in order to acquire communicative competence. In this respect, I analyse the relationship between communicative events and acts, in order to provide an answer to the question **“how did the children construct categories of meaning using language in social interaction?”**. I argue that the capacity for understanding and managing deictic terms and intertextual references in context, the identification of cultural patterns, the distribution of tasks according to a division of labour, and the intrinsic collaborative nature of the construction of meaning, are abilities that children mastered in order to participate competently in the communicative events for the construction of WebPages in History.

In **Chapter 7**, I develop a heuristic for investigating the categories constructed by participants in relation to the activity frames of design, History and group work, using a range of discursive analytic strategies and ethnographic tools. The heuristic is intended

to explore the relationship between communicative events and situations by a) using a multiple data strategy, triangulating evidence from various data sources to investigate the categories constructed by participants, b) using an emic perspective, c) analysing affordances and constraints of cultural tools mediating situated actions, and d) making explicit links with theory.

In **Chapters 8, 9 and 10**, I answer the question of **“What categories of meaning were constructed by children using language in social interaction, according to the activity frames of a) design, b) History, and c) group work?”**. In this respect, using the heuristic developed in Chapter 7, I found that children constructed the categories of ‘visibility’, ‘organisation’, ‘visual semiotics’, ‘personal aesthetic preferences’, and ‘sense of audience’ in relation to the activity frame of design. They constructed the categories of ‘rich and poor’, ‘famous characters’, and ‘inventions’ in the activity frame of ‘History’. Finally, they constructed the categories of ‘power/knowledge’, ‘collaboration’, and ‘empathy’ in the group work frame.

In **Chapter 11**, I conclude how the situated activity system for the construction of WebPages in History was constituted, providing a graphic representation of such system and discussing to what extent cultural tools such as the principles of design, historical narratives and the Thinking Together Skills were appropriated, mastered, transformed, or even resisted by participants within the system. I also argue about the multilayered nature of construction of meanings, within the activity system, and provide examples of “double-layered” situations in which participants attend to the existence of design genres in History, use semiotic resources collectively in an open ended way, and distribute tasks according to their degree of expertise managing historical narratives.

In **Chapter 12**, I bring together the main themes of the dissertation, summarising and evaluating the main contributions, describing the implications for educational practice, and suggesting directions for future research.

1.4 Publications and Conference Papers Based on the Research Described in this Thesis

The research described in this dissertation has been the basis for one refereed journal article and a number of other publications. A version of pilot study 1 was published in the *Journal of Classroom Interaction*. Part of the data reported in pilot study 2 has been used for an article in *Reading, Literacy and Language*, as well as a contribution to a chapter in a book edited by Charles Kinzer and Ludo Verhoeven, titled *Interactive Literacy*. These publications have been produced in conjunction with my supervisors, Neil Mercer and Rupert Wegerif. Also, data from the pilot studies was used for two presentations in the 9th EARLI Conference held in 2001 in Fribourg, Switzerland, for a talk in the Fifth Conference of the International Society for Sociocultural and Activity Theory (ISCRAT) held in 2002 in Amsterdam, The Netherlands, and for a presentation in the Ninth Conference of the International Network for Research on Literacy and Education held in 2002 in Beijing, China. In addition, the data and methodology developed in the main study has been presented in a poster in the CSCL conference held in 2003 in Bergen, Norway, and in two presentations in the EARLI Conference held in 2003 in Padua, Italy. Finally, I wrote a chapter for a book in relation to the use of ICT in education from a sociocultural perspective, for a Master course produced by the Ministry of Education in Mexico.

CHAPTER 2. LITERACY AND ICT: A SOCIOCULTURAL PERSPECTIVE

2.1 Introduction

The literature review that I present in this chapter is concerned with one of the major issues that has changed the way in which educational practices are conceived: Information and Communication Technologies (or better known as ICT), and the way in which literacy is re-defined due to the use of these technologies. Particularly, I will focus on the processes involved in the creation of electronic multimodal texts in a collaborative way, as one of the more evident new literate activities of the information era.

First, I will explore the major issues around literacy, ICT, and the construction of multimodal texts. In this respect, I will argue in favour of the generation of a research approach that takes into account the perspective of participants in literacy practices to be able to understand how ICT tools, as well as cognitive and communicational processes, are merged in action in such practices. Second, I will explain how such a perspective can be taken by following the concepts and principles outlined as part of a sociocultural approach to human cognition, as originated by Vygotsky (e.g. 1978; 1987) and later developed and interpreted by several researchers in different ways, yet keeping a core set of principles that unify this perspective amongst these interpretations. Third, I will return to how these principles can be applied to the study of literacy by contrasting two main perspectives in literacy research: an autonomous model and an ideological model, arguing that, on the one hand, the autonomous model focuses solely on a cognitive interpretation of literacy without looking at context or detailing the processes of enacting literacy skills, and on the other hand, exploring how the focus in context and social action of the ideological model can be studied by using a sociocultural approach.

Fourth, I will conclude this chapter by explaining how this discussion was used as a starting point for the development of the research questions pursued in this dissertation and the design of the pilot study as described in Chapter 3, and the later conceptualisation of the main study in Chapter 5.

2.2 Literacy, ICT, and Multimodal Documents

With the introduction of Information and Communication Technologies (ICT), literacy has been transformed in relation to the documents and the practices afforded by these new technologies. Therefore, the traditional conception of literacy in relation to the ability to read and write (Hornby, 2000; Pearsall, 1998) has been challenged by the emergence of 'new types of texts' associated with the possibility to construct, transform, and display them electronically. These new types of electronic texts include features such as a wider presence of audio-visual elements, the use of a more non-linear arrangement of information, and an ever-changing nature linked to the processing speed and simulation capacity of computers and ICT networks (Mayer, 2000; Rassool, 1999). Examples of these texts include: e-mails, electronic concept maps, spreadsheets, Power Point presentations, and WebPages just to mention some examples.

In this respect, some authors have also argued that literacy should include the ability to read and write images (Flood, Heath, & Lapp, 1997a), given the increasing proliferation of "multimodal" electronic texts as part of literacy practices at home, community settings, and particularly in classrooms (Unsworth, 2001). A multimodal text then not only includes words, but also other semiotic modes of communication present in electronic (and other material) media, such as pictures, colours, backgrounds, icons, and sounds, amongst the possible audio-visual resources constituting texts. Thus, given the prominence and the variety of visual resources used in printed and electronic documents, for Kress and van Leeuwen (1996) literacy is currently conceived as being

associated with the development of skills dealing with visual grammar in multimodal texts.

Similarly, authors like Reinking (1994) have suggested that the traditional conception of literacy should be expanded to include 'electronic reading and writing'. For Reinking, reading and writing in an electronic way aggregate new dimensions to literate activity beyond printed materials. Activities like keyboarding, word-processing, looking for information in databases, or reading a hypermedia document, require a new set of skills different to the ones used by students taught with the framework of the traditional concept of literacy in similar activities like handwriting, looking for information in catalogues or reading linear texts.

In addition, others have argued that with the use of ICT in everyday classroom activities, the practice of literacy has also started to have a greater convergence with the learning of subject areas of the curriculum (Leu & Kinzer, 2000). That is, as information resources are networked and as literacy becomes more tightly defined around ICT in schools, it becomes more difficult to separate subject-area learning into separate categories and time periods during the day, and therefore it also becomes more difficult to separate literacy learning from the learning of Science, History, Geography, etc. According to Leu & Kinzer, increasingly, literacy learning takes place within information contexts whose boundaries disappear in a connected world of ICT resources.

In a related manner, researchers such as Labbo (1996; Labbo & Kuhn, 1998) and Heath (2000) have asserted that reading and writing is becoming even more important in the integrative process of literacy with ICT. For instance, students increasingly need to effectively locate and read information to solve problems in several domains of the curriculum and then to communicate results to others electronically, and consequently,

in written form. However, the same researchers have asserted that increasingly, children also need to be supported in learning how to learn about literacy from one another. That is, pupils need to learn to talk to each other in order to co-ordinate efforts to construct electronic texts. Therefore, issues of how to promote 'effective' collaboration in relation to the use of language and other semiotic resources in small groups are also a key concern of the research agenda in literacy as well as in other areas of education (e.g. Cowie & van der Aalsvort, 2000; Dillenbourg, 1998).

In summary, defining what is literacy, and what to do with the practice of literacy in relation to ICT has become a major issue in education (Leu, 2000). Thus, the research agenda seems to be mainly related to the description of the changes that the introduction of ICT has produced in the different activities associated with literacy. However, I would argue that such descriptions need to account for the different cognitive and communicative processes that mediate the actions of participants, as well as detailing the relationship with the sociocultural context in which these practices take place. In other words, it is important not only to provide a description of events in which reading and writing are associated with the use of ICT tools, but also to provide an account of the models and concepts brought to those events as well as the dialogues used by participants to construct meaning in situated action. That is, the challenge is to find a perspective to carry out research studies capable of documenting the relationship between mind, language, context, tools, and culture in situated literacy events.

One perspective that seems to be useful in order to meet this challenge is the sociocultural approach originally developed by Vygotsky and subsequently developed in the last decades of the twentieth century. In the next section, I will describe in detail the main principles and concepts of this research perspective.

2.3 Sociocultural Theory

Lev Vygotsky was born in Russia in 1896. He studied literature, semiotics and law, and was primarily interested in developing an approach in psychology that could resolve the problem of cultural mediation that was not addressed by the associationist studies carried out by Pavlov and colleagues. These studies portrayed learning as a conditioned and physiological process, and dominated the research agenda in psychology at the beginning of the twentieth century. In addition, although Vygotsky admired the work of Piaget, for Vygotsky human development and learning are not an individual construction, but are fundamentally the product of social participation linked to the use of cultural tools. Vygotsky died in 1934 and due to the ban imposed by Stalin on the publication of his work, his work was only rediscovered in Western countries around the 1970's, inspiring the critical reformulation of his seminal ideas in new research projects and methodological and theoretical proposals (e.g. Bruner, 1986, 1990; Chaiklin & Lave, 1993; Cole, 1996; Cole & Wertsch, 1996; Daniels, 2001; Edwards & Mercer, 1987; Engeström, 1990; Gillen, 2000; Hatano & Wertsch, 2001; Holland & Cole, 1995; Holland, Lachicotte Jr., Skinner, & Cain, 1998; John-Steiner, Panofsky, & Smith, 1994; Lave & Wenger, 1991; Lee & Smagorinsky, 2000; Mercer, 1995; Moll, 1990; Resnick, Säljö, Pontecorvo, & Burge, 1997; Rogoff, 1990, 1994; Säljö, 1991, 1997a; Wells, 1994, 1999; Wertsch, 1985a, 1985b, 1991, 1998; Wertsch, del Rio, & Alvarez, 1995). His ideas have been also incorporated and blended with other methods and concepts in the research agenda of several disciplines such as psychology, anthropology, sociology, linguistics, and literature, that have provided a myriad of interpretations about his work as well as enriching what is currently conceptualised broadly as a sociocultural theory in education. However, despite the apparent endless possibilities of using Vygotsky's insights, by reviewing the literature presented above in

this section, it is possible to distinguish a set of principles that characterise this perspective:

1. The social origin of higher psychological processes.
2. The mediated nature of human action.
3. A genetic perspective on psychological functions and situated practices.

Next, I will review each of them.

2.3.1 The Social Origin of Higher Psychological Processes

This principle arises from Vygotsky's conception of the primacy of the social over the individual in terms of human development. That is, for Vygotsky, it was important to show how individual responses emerged from the forms of collective life. In this respect, although Vygotsky considered the conditions of production of such social life as typically studied by sociologists and economists at a societal level, he was more interested in the level of analysis of social exchanges, a level he named "interpsychological". Thus, for Vygotsky, all the higher psychological processes had their origin in the interpsychological functioning of individuals as expressed in what he called the "genetic law of cultural development":

"Any function in the child's cultural development appears twice, or on two planes. First it appears in the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary attention, logical memory, the formation of concepts, and the development of volition. We may consider this position as a law in the full sense of the word, but it goes without saying that internalization transforms the process itself and changes its structure and functions. Social relations or relations among people genetically underlie all higher functions and their relationships." (Vygotsky, 1981, p. 162, in Wertsch, 1985b)

In this quotation we can see the introduction of the term “internalization”, as the mechanism in which the interpsychological becomes intrapsychological. According to Wertsch (1985b), this is a similar process to the one described by Piaget in relation to the process of equilibration of schemata to internal cognitive structures as a result of action with the environment. However, in contrast to the position outlined by Piaget, Vygotsky considered internalization as a process in which social representational systems (such as language) become internal as tools mediating cognition. As a result, Vygotsky emphasised the need to investigate the process of internalization of speech.

Although the term internalization implies a social origin of human cognition, this concept has also been challenged by scholars who think that it portrays a dualist model of reality in which mind and body are opposed and constituted of different substances. Thus, ‘internalization’ promotes the idea that it is necessary to look for “internal concepts, rules, and other such mental entities that are quite suspect in the eyes of philosophers such as Wittgenstein” (1953, in Wertsch, 1998, p. 48), because of its static, abstract, and decontextualised conceptualisation that is typical of cognitive accounts.

In this respect, Wertsch has pointed out that it is better to use terms such as “mastery” and “appropriation” instead of internalization, not only as linguistic replacements of a term, but as new conceptual interpretations of the semiotic nature of social processes. Hence, given that in Sociocultural Theory, social processes are mediated by different semiotic resources that can be conceptualised in general as mediational means or cultural tools, for Wertsch (1998), the process of ‘mastery’ would involve “knowing how” to use a mediational means with facility (p.50). His argument follows from the fact that many forms of mediated action need to be carried out externally, in a distributed way between agents and tools, that implies that such action may not necessarily be internalized in a direct manner, as a sort of internal structure, thus

representing the situation in the head of the agent in a static way. Wertsch suggests that an alternative explanation could involve a connectionist interpretation (e.g. Rumelhart, McClelland, & Group, 1986) where an internal plane is indeed formed, not as a cognitive structure, but as a neural network that has learned to use a set of cultural tools in specific contexts. In this way, as well as the body, the neural network is quite material as is embedded in the organic structure of the brain, in contrast to the conceptualisation of cognitive structures that are envisioned by some researchers as made of a different mental substance, in a dualist Cartesian fashion. Also, Resnick, Pontecorvo, and Säljö (1997) have a similar connectionist interpretation of mind when they mention that it is as if the brain had learned to be tuned “to respond easily and automatically to particular affordances and constraints” in situated actions (p. 5).

In a related manner, “appropriation” implies for Wertsch, following Bakhtin, “the process of making something one’s own”, that is, taking something that belongs to others and making it one’s own. This process is evident in the appropriation of the words of others, while producing utterances in dialogue:

The word in language is half someone else’s. It becomes “one’s own” only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention. Prior to this moment of appropriation, the word does not exist in neutral and impersonal language (it is not, after all, out of a dictionary that the speaker gets his words!) but rather it exists in other people’s mouths, in other people’s contexts, serving other people’s intentions: it is from there that one must take the word, and make it one’s own. And not all words for just anyone submit equally easily to this appropriation, to this seizure and transformation into private property: many words stubbornly resist, others remain alien, sound foreign in the mouth of the one who appropriated them and who now speaks them; they cannot be assimilated into his context and fall out of it; it is as if they put themselves in quotation marks against the will of the speaker. Language is not a neutral medium that passes freely and easily into the private property

of the speaker's intentions; it is populated –overpopulated– with the intentions of others. Expropriating it, forcing it to submit to one's own intentions and accents, is a difficult and complicated process. (Bakhtin, 1981, p. 293-294, in Wertsch, 1998, p. 54)

Analysing this quotation, Wertsch argues that the process of appropriation always involves some form of resistance that emerges out of the unique set of affordances and constraints of cultural tools as they are being used in a given context. In addition, according to Wertsch, the processes of mastery and appropriation can be partially intertwined, although it is possible for agents to master a tool but not appropriate it if they have a feeling of conflict or resistance. I will return to issues of mastery and appropriation of cultural tools in the following section about meditation. Nevertheless, to conclude this section, I will discuss the critical reformulation of the concept of internalization as a process of participation, as proposed by Rogoff.

Barbara Rogoff (1990) has pointed out that the process of transference between an “external” and an “internal” plane, as proposed by Vygotsky, but also suggested by other authors such as Piaget (1977) and Bandura (1986), has in general been conceived in a rather underspecified way, without describing in detail how this process is actually carried out in practice. In this respect, she writes:

The work on social learning and socialization appears to conceive the process of internalization as one in which individuals are regarded as separate from one another and are considered to learn a lesson from observation or participation and then to internalize it, so that it becomes a part of their own bag of tricks. There are arguments about whether the lesson is brought inside unchanged or is transformed in the process of being internalized, and discussion of the kind of model of reinforcement that is necessary to get children to bother to internalize the external model. But the underlying assumption is that the external lesson is brought across a barrier into the mind of the child. How this is done is not specified, and remains a deep problem for these approaches... However, the problem of

specifying the process of internalization may be a problem only if priority is given to the internal or individual functioning. (Rogoff, 1990, p. 194-195)

Rogoff suggests that this problem can be solved if individuals are conceived as appropriating features of the activity in which they are engaged as participants and active observers, so that interpersonal and intrapersonal aspects are considered as a whole. Thus, what is carried out in social interaction is never outside, as externally separated by a barrier, and as a result there is no need to have a separated process of internalization.

More specifically, according to Rogoff, when acting and communicating, participants are continually engaged in interchanges where the “internal” and the “external” are blended. Such interchanges are characterised by the fact that contributors share meaning. Thus, the “barriers” between persons communicating are also diffuse, that is, it is impossible to say “whose” is the object of shared interest, or “whose” is a given idea constructed in collaboration. A person who participates in the shared resolution of a problem or in communication with others, it is engaged in a process that is beyond the individual level. Hence, it is difficult to demonstrate that in processes of collective achievement of goals there is something external and static being transferred internally, as if it were separated from the activity. In a related manner, if participants act from the perspective of a shared comprehension of the task, the later use that a given person makes of this shared comprehension does not coincide exactly with what was constructed jointly with other participants, as this would be only the appropriation of a specific aspect of a given activity from a personal point of view. As a result, Rogoff argues in favour of the importance of participation in social practices, and the situated nature of activities for any process of appropriation to take place. Moreover, this appropriation, is conceptualised by Rogoff (1994) as a shift in the way participation is

carried out by members of communities of learning. I will discuss in more detail the issues involved in the situated nature of human action and the need to analyse its conditions of production in section 2.3.4.

In this section, in summary, it can be argued that, from a sociocultural perspective, the social environment plays a key role in human development. However, as I have discussed in this section, a simple transference from an “interpsychological” to an “intrapsychological” plane can no longer be assumed as Vygotsky originally conceived. On the contrary, the development of human psychological processes such as memory, speech, reasoning, and learning, involves the appropriation and mastery of cultural tools, and the shift of participation in social practices by members of specific communities who reconstruct actively the use of these tools and the ways social practices are carried out in specific sociocultural contexts.

2.3.2 The Mediated Nature of Human Action

According to Wertsch (1991), “a sociocultural approach to mind begins with the assumption that action is mediated and that it cannot be separated from the milieu in which it is carried out” (p. 18). In this respect, Vygotsky is again the initial reference to understand what is meant by mediation. Wertsch (1985b) points out that Vygotsky, influenced by Marx and Engels, considered human activity as being crucial for the development of consciousness. Marx and Engels proposed that we become human by engaging in the process of labour, and Vygotsky followed this claim. However, he put a particular emphasis on the study of the role of tools on this process, as Engels had suggested previously in relation to the concept of ‘tool’ as one of the most inherently human products of social activity.

Consequently, Vygotsky based the development of his intellectual project on the concept of mediated activity, proposing that humans are not limited to respond to

stimulus, as Pavlov had suggested in his studies of conditioned responses, but that individuals act on stimulus, transforming their nature. According to Vygotsky, this is possible due to the mediation of a second system of symbols that are located between stimulus and responses, which differentiate a human culturally mediated response from a physiological one as studied by Pavlov and colleagues. Thus, in contrast to the chains of stimulus and responses as a base for human learning, Vygotsky proposed an activity cycle in which, due to the use of mediating instruments, the subject modifies the stimulus, not only responding to its presence in a mechanical way, but acting on it. As a result, human activity is conceptualised as a process of transformation through the use of instruments.

In addition, Vygotsky (1978) distinguished two types of instruments in relation to the type of activity that is produced. The most simple type of instrument would be the “technical tool”, that acts materially on the stimulus, modifying it. Thus, a hammer is a technical tool that acts directly on a nail, so that the action not only responds to the environment but modifies it in a material way. Culture provides the individual with the tools required in order to modify the setting, and to adapt to it. However, according to Vygotsky, there is a second type of mediating instruments of a different kind, that produce a different type of adaptive activity. Apart from providing technical tools, culture is also fundamentally constituted by systems of signs or symbols that mediate human actions. The semiotic system that is used with more frequency is spoken language, but there are many other semiotic systems that afford human action, such as measurement and chronological systems, arithmetic, the alphabet, etc. In contrast to technical tools, these psychological tools do not modify a stimulus directly, but transform the mental processes of the person who is using it as a mediator, through the way activities are being carried out. For instance, according to Wertsch (1985b), the introduction of a psychological tool, such as language, into a mental function, such as

memory, causes a fundamental transformation in that mental function. As a result, Vygotsky conceived human development “not as a steady stream of quantitative increments but in terms of fundamental qualitative transformations or “revolutions” associated with changes in the psychological tools” (Wertsch, 1985b, p. 79).

Although the analogy between technical tools and psychological tools proposed by Vygotsky has been highly acclaimed for its distinctive emphasis that allows the analysis of culture and social conditions to enter into the study of human development, he has also been criticised for keeping this analogy constrained to the analysis of language mainly in face-to-face interactions with little mention of the diversity of other mediational means that are also part of the sociocultural context in which mediated action takes place (e.g. Wertsch, 1991, p. 93). In this respect, Wertsch has argued that this emphasis on verbal mediation is a decidedly Western value, and as such other non verbal mediational means need to be recognised as important in the manipulation of context, as has been noted by other researchers such as Rogoff (1990) and Kearins (1986). Therefore, Wertsch argues in favour of using the notion of cultural “tool kit” to include the diversity of mediational means that are used normally in goal-directed and tool-mediated action. This framework takes into account mediators such as computers, art, music, etc., that are not necessarily verbally mediated. Although this is a natural extension of Vygotsky’s insights that may not be problematic when a few mediators are analysed in human action, the picture can become quite complex if they are analysed in conjunction with verbal communication. In order to provide a solution to this complexity, Wertsch argues that it is important to look at the social function that is being served by the use of a set of mediational means. Although this was already proposed by Vygotsky in his studies related to the diversity of functions of language in social interaction, he did not develop further his ideas about the different lexical and morphological features of language in use. Therefore, for Wertsch, one alternative to the

study of mediated action and the multiplicity of tools in action, is the use of Bakhtin's theory of dialogicality, and in particular the concepts of 'speech genre' and 'social languages' that are described by Bakhtin in terms of the social and cultural functions that language serves in interaction. More specifically, Wertsch uses Bakhtin's definition of the characteristics of the utterance as part of a speech genre to analyse mediated action: a) in terms of the perspectives taken by participants in a conversation, that is, the goals being pursued by them that can be identified by looking at the types of utterance-rejoinder pairings in dialogue, b) the referentially semantic content (e.g. the themes) of the utterance, and c) the expressive aspect or emotional accent by which an utterance is being created. Wertsch argues that by following this approach it is possible not only to analyse the use of language and other mediational means such as external objects that are part of the same activity, but also, to analyse the different voices that interanimate the dialogue as exemplars of different psychological tools in use in mediated action.

In a different way, Cole (1996) has argued that the metaphor of semiotic mediation proposed by Vygotsky can be extended to provide a more comprehensive notion of culture than the one Vygotsky had in mind. He starts by discussing how Vygotsky and colleagues (e.g. Luria) had a rather underdeveloped notion of culture that made them think, based only on interactional procedures, that culturally informed judgements of participants in relation to logical and mathematical problems were a sign of the lack of cognitive development in relation to literacy and the formation of scientific concepts. Cole and others (e.g. Donaldson, 1978, 1992) have disagreed with these kinds of interpretations which put forward a view in which decontextualisation is considered to be the ultimate goal to be achieved in relation to cognitive development, and where controlled experimentation is considered to be the most suitable way to investigate human minds, as if the methods of researchers were free of their own cultural history. As a result, according to Cole, what is needed is a better notion of culture that can allow

the interpretation of how humans make sense of their own actions in sociocultural contexts. In this respect, he starts by claiming that mediation is better understood if the more general term of artifact is used instead of the concept of tool. In other words, for this researcher, the concept of tool is a subcategory of the conception of artifact. Artifacts are ordinarily conceived as physical objects, and in this sense it is easy to match the category of artifact with the category of tool. However, what is really gained by using the concept of artifact instead of tool to account for processes of mediation in human action, is that the concept of artifact incorporates the idea of historical and cultural construction of mediational means. For Cole (1996):

“... an artifact is an aspect of the material world that has been modified over the history of its incorporation into goal-directed human action. By virtue of the changes wrought in the process of their creation and use, artifacts are simultaneously *ideal* (conceptual) and *material*. They are ideal in that their material form has been shaped by their participation in the interactions of which they were previously a part and which they mediate in the present... Defined in this manner, the properties of artifacts apply with equal force whether one is considering language or the more usually noted forms of artifacts such as tables and knives which constitute material culture.” (p. 117)

Following this perspective, the form of an artifact is more than a purely physical form, as in it is embedded the social function it serves. Thus, when it is used, an artifact acquires a social significance which corresponds to the symbolic, or ideal aspect of mediated action.

To clarify this issue, I will use an example provided by Holland and Cole (1995) in relation to how they conceive the notion of artifact. Holland and Cole describe how they were interested in investigating how culture could be conceptualised in relation to human activities where several mediators are at stake in social situations, in a similar fashion as other anthropologists have investigated complex systems of distributed and

everyday cognition (e.g. Hutchins, 1991; Lave & Wenger, 1991). They documented how a dinner party took place in several stages where different artifacts played a part. For instance, once they are greeted at the entrance, guests were invited to seat in chairs, they were shown the house, then guests talked to each other, grabbed some nibbles and drinks, and when the dinner was ready they got up and followed the host to the dining room. In this point, Holland and Cole (1995) provide the following description:

The host stationed himself near one end of the table. He had a small scrap of paper in his hand. On it were scribbled names placed around an oval space. He glanced at one of us, glanced at the paper, and directed the person to his or her seat. At the end of this process, which went fairly smoothly, all 12 of us were sitting presumably in the order the host planned using his scrap of paper. (p. 477)

Holland and Cole question where the artifacts mediating this social action can be identified. Although they recognise the materiality of the scrap of paper mediating the distribution of guests around a dinner table, they argue that the paper itself can not account for the way this activity took place in such a smooth way. Instead, they suggest that the history in which dinner parties are arranged determines the way the scrap of paper was used, and the way guests behaved around this artifact. That is, presumably, this is not the first time guests attended a dinner party where other pieces of paper, such as invitation cards and guests lists have been used as artifacts to mediate this type of social events. In addition, they also recognise the use of language by the host to accommodate the guests around the table as another artifact present in the situation, which also can be conceptualised as historically adjusted to the situation and hence, it is not unfamiliar to the guests (e.g. none of the guests appeared surprised by the words being used to be seated around the table). Holland and Cole propose that the history of the use of these artifacts constitute the ideal aspect of culture that can be conceptualised as part of a cultural model, distributed amongst the members of a given society (e.g.

D'Andrade, 1990; Holland & Quinn, 1987). The scrap of paper, the words uttered, and the other objects used in the dinner party constitute the material aspect of culture which is situated in practice. Culture is never static, nor individually possessed, but is always reconstructed in action and distributed amongst participants and historically determined artifacts.

More recently, being aware of the suspicions that words such “ideal” and “model” can raise because of its static and cognitive connotations, and acknowledging the importance of communicative practices for the development of mind, Holland and colleagues have moved to a discursive notion of what a cultural model is. They still emphasise the distributed and mediational role that culture plays in human action. However, rather than relying on a cognitive account of the existence of such models, following Harré (1994) in relation to the existence of storylines as “the taken-for-granted unfolding of particular events” (cited in Holland et al., 1998, p. 297), they propose that cultural models are comprised by a set of this type of narratives. In addition, Cole (1996) mentions that this position is consistent with the argument put forward by Bruner (1990) with regard of the existence of narrative as one of the primordial modes of human thought. (See also Gee, 1999; Gee & Green, 1998, and Chapter 8 in this dissertation for a further discussion of how cultural models are conceptualised as collective, distributed narratives used in discourse by participants to construct situated meanings).

A different way to conceptualise cultural mediation has been proposed by Säljö and Bergqvist (1997), documenting how a psychological process can be mediated by the use of tools. Säljö and Bergqvist investigate how perception of the properties of light is carried out by 13-14 years old students in an optics lab in a school in Sweden. Like Vygotsky, these Swedish researchers start with the assumption that a psychological

function such as perception is not exclusively a biological, natural, and autonomous function, but that on the contrary, it is a function that is culturally constructed in different settings (Säljö, 1992). The way that this construction of perception is carried out can be accounted for in different ways. On the one hand, perception is mediated by the historical design of the artifacts that are being perceived, an argument that is similar to the one expressed by Cole, as I discussed in the previous paragraphs. Thus, the students investigated by Säljö and Bergqvist were asked by their teachers to experiment with tools such as a lamp, a diaphragm, and a prism, in order to provide explanations about the nature of refraction and reflection of light according to variations in the reflection angle, the focus and the focal distance of different light sources. According to the teachers of these students, these artifacts were supposedly designed to help the students to 'see' naturally the desired optical phenomena by experimenting, and testing hypothesis in peer group work. However, Säljö and Bergqvist demonstrated in their analysis that this was not the case. On the contrary, they showed how in group conversations students were not able to see what they were asked for, and this was due to the fact that students lacked the conceptual resources of a particular theory in physics in order to be able to identify what they were meant to, according to the objectives of the class. According to Säljö and Bergqvist, these conceptual resources, as a different type of artifact to the prism, the mirror, and the lamp, are also required to mediate this activity in the way intended by the teachers. However, conceptual resources, in contrast to the physical objects being manipulated in this experiment, have a different nature: concepts have their origin in discursive practices that take place within specific scientific communities, and this is not necessarily the case for physical tools which are not discursively constructed. Thus, in order to see the optic laws in the experiments they were carrying out, students not only needed the mediation of the cultural artifacts such

as the lamp, the mirror, and the prism, but also, the mediation of specific discipline based, and discursively constructed concepts. In Säljö's words:

"The technology present in the optics lab embodies perspectives on the nature of light; it is by no means theory neutral... [However], learning in such contexts implies appropriation of accounts of the world that are neither in the objects themselves nor in our brains. Rather, they are cultivated in institutional settings for particular and sometimes highly specialized purposes... [Therefore] the difficulties that our students have in understanding the principles of light, and precisely how these are illustrated by means of the tools utilized in the experiments, have less to do with problems of acquiring knowledge in a narrow sense or with deficits in conceptual understanding and more to do with their lack of access to communities of practice in which light is perceived and construed in the way characteristic of physics." (Säljö, 1997a, p. 402)

In summary, as well as Wertsch and Cole, and in accordance to Vygotsky's interest in semiotic mediation, Säljö and Bergqvist conceptualise human action as mediated by cultural tools. However, for the latter researchers, the emphasis is on the origin of these artifacts as located in practices that are essentially discursive; that is, concepts are discursive phenomena developed in communities of practice (see also Säljö, 1997b, 1999). Their position is that communicative practices are the site where these psychological tools are learned to be used given that knowledge and concepts are embedded in the social use of language.

The way cultural tools, mediational means, artifacts, cultural models, and discursive accounts have been conceptualised as constitutive of mediated action have some differences with regard to the nature of the materiality of these means and the ways in which cultural mediation may be interpreted: e.g. Is the materiality understood in terms of objects, discourses, or practices? What comes first: the agent, the tool, or the practice? These are difficult questions, that may not have a definitive answer.

Nevertheless, what it is possible to argue about the formulation of any answer is that action is central for any explanation of the way that these elements are related, as it is only in action that agents, tools and practices can be understood, not in a static or abstract general definition.

To conclude this section, from the discussion presented above in relation to the nature of mediation, and also following Wertsch (1991; 1998) in relation to his analysis of the properties of mediational means, I would suggest that there is a certain consensus that mediated action always implies: a) some form of materiality with which agents interact, and where there is an irreducible relationship between agents and cultural tools, b) a multiple, and often simultaneous role played by different mediational means in any action, and c) a process of historical production and reconstruction of situated practices. I will explore further the linked issues of historical production and situatedness in the next section.

2.3.3 Genetic Perspective of Psychological Functions and Situated Practices

According to Wertsch (1998), “the task of sociocultural analysis is to understand how mental functioning is related to cultural, institutional, and historical context” (p. 1). Vygotsky again is the main source of reference to understand how such analysis can take place. Following a Marxist perspective to develop his project of psychology as the study of consciousness, Vygotsky proposed that higher mental functions are the product of the history of achievements that could be traced in different genetic domains. Wertsch (1985b) has identified four domains in which Vygotsky proposed the study of human consciousness: phylogenetic, sociocultural, ontogenetic, and microgenetic. According to Vygotsky (1978), the task of a socio-historical analysis of the construction of mind is to discover the particular laws that govern each of these domains, and to look

at the interactions between different forces, coming from each of them, which operates at a certain moment in a psychological function, transforming its nature. More specifically, along with his colleague and student Luria, he stated:

“Our task [in this volume] was to trace *three basic lines* in the development of behavior –the evolutionary, historical, and ontogenetic lines– and to show that the behavior of acculturated humans is the product of *all three lines* of development, to show that behavior can be understood and explained scientifically only with the help of the *three different paths from which the history of human behavior takes shape*.” (Vygotsky & Luria, 1930, p. 3, cited in Wertsch, 1985b, p. 27)

2.3.3.1 Phylogenetic Domain

The first of these domains is located at a phylogenetic level. According to Vygotsky (1986), in this domain the analysis is concerned with the development of consciousness as a result of the emergence of culture in the development of species. He argued that the influence of culture represents the main difference between humans and other species of animals, including apes, and following a Marxist approach proposed that culture can be characterised by three aspects: the use of tools, the emergence of socially organised activity (e.g. division of labour), and the emergence of speech.

Thus, apes are able to manage tools, but in contrast to humans, they are not able to organise themselves in a society formed by a division of labour, or to communicate with each other using speech. Hence, for Vygotsky, there is a discontinuity between biology and culture, in which culture replaces biology at a certain point in the development of species. This claim has been challenged by later studies (e.g. Geertz, 1973) who have demonstrated that such a clear cut distinction cannot be stated between culture and biology. For instance, contemporary research in physical anthropology demonstrates that the transition between primates and humans has taken more than four million years in which there has been an intertwined process of development between these forces in

the phylogenesis of humans as a species. Although the period of transition is much longer than Vygotsky had estimated, his argument about the prominence of culture over biology as the site where higher psychological functions are created is not undermined as a key difference with other primates (Wertsch, 1985b, p. 30).

2.3.3.2 Sociocultural Domain

According to Vygotsky (1981), the sociocultural domain is characterised at a level in which development is constituted in terms of the historical development that higher mental functions have from a 'rudimentary' to an 'advanced' state. The difference between these two points of development is found in the role mediation plays in the constitution of mind. That is, Vygotsky privileged the study of symbolic forms of human activity, such as the use of language, as the primary focus of investigation to differentiate between the rudimentary and the advanced higher psychological functions he had proposed. The main difference between them is the degree in which decontextualisation can occur in mental functions such as thinking and speech, as a process of increasing abstraction that Vygotsky conceived as superior to the concrete and more contextualised uses of language and its relation to thought. Therefore, the Darwinian laws governing in the phylogenetic domain are replaced in the sociocultural domain by the principle of decontextualisation of mediational means (Wertsch, 1985b, p. 33).

For instance, Vygotsky and Luria were interested in studying literacy as a process in which a language system was constituted formally (e.g. as in the alphabet) and in that respect to show that the mastery and internalisation of that system allows humans the constitution of abstract concepts and reasoning skills that otherwise are not possible in the absence of the mediation of language as a primary semiotic system. For instance, Luria (1976) found that non-literate subjects would categorise objects presented in a test

as if they were part of concrete tasks in everyday settings, whereas literate subject would categorise the same objects as part of linguistically defined and more abstract categories.

Vygotsky and Luria's approach to thinking as a process of increasing decontextualisation, and in particular to literacy as a decontextualising uniform practice of reality has been challenged by researchers such as Scribner and Cole (1981) who have demonstrated that the mastery of a symbolic system such as written language does not guarantee by itself more advanced ways of reasoning. It is only when literacy is conceptualised within the process of schooling that the changes attributed by Vygotsky and Luria in relation to the development of decontextualised reasoning skills are found.

2.3.3.3 Ontogenetic Domain

In the ontogenetic domain, Vygotsky proposed that it is the place where the natural and cultural forces operate in combination in individual human development. He proposed that the biological and the cultural aspects of development are separated at birth and that they start to merge up to the point where the cultural force takes the lead on the development of higher psychological processes:

"The cultural development of the child is characterized first by the fact that it transpires under conditions of dynamic organic changes. Cultural development is superimposed on the processes of growth, maturation, and the organic development of the child. It forms a single whole with these processes. It is only through abstraction that we can separate one set of processes from others... The growth of the normal child into civilization usually involves a fusion with the processes of organic maturation. Both planes of development –the natural and the cultural– coincide and mingle with one another. The two lines of change interpenetrate one another and essentially form a single biological line of sociobiological formation of the child's personality." (Vygotsky, 1960, p. 47, cited in Wertsch, 1985b, p. 41)

That is, for Vygotsky, the natural maturation of the brain does not play a role in the course of historical development. Thus, he rejected the notion that ontogenesis recapitulates social history because social forces function in relative isolation to the maturational processes.

As an illustration of how Vygotsky studied the ontogenesis of a higher psychological process, he looked at how children develop scientific concepts mediated by the use of language. He asked participants, ranging from childhood to adulthood, as well as disabled persons to categorise a set of objects based on a range of characteristics such as shape, colour, height, etc, and to relate such categorisation to a set of nonsense words that were written on the bottom of the figures. From the results obtained in this study, Vygotsky (1934) proposed an ontogenetic progression from “unorganized heaps”, to “complexes” and then to “concepts”. In the “unorganized heaps”, subjects grouped objects based on subjective criteria that were not obvious to the observer. In the “complexes”, there are some explicit criteria linking the groups of objects, but they are flexible, and still related to concrete features that subjects use to shift from one criteria to another one along the categorisation process. Finally, in “concepts”, the subjects grouped objects based on systematic and stable criteria. In addition, Vygotsky argued that this type of “scientific concepts” are different in nature to “spontaneous concepts” in the sense that scientific concepts are related to each other by means of rules that are part of a system that is not part of the concrete context in which these objects are present. He proposed that scientific concepts are the result of schooling, as opposed to the spontaneous concepts which are learned elsewhere. By following this procedure, it is possible to see once more how, as well as he did in his studies discussed in the sociocultural domain, Vygotsky privileged the study of the ways in which linguistic signs were transformed into a set of decontextualised concepts, as opposed to the linguistic organisation of signs related to contexts. I will return to this issue when I

discuss the further development of more situated approaches to the study of mind that have been carried out more recently.

Vygotsky has received criticisms in relation to his studies in this genetic domain. On the one hand, Vygotsky has been challenged for not giving a complete account of how biological forces interact with the cultural ones privileged in his investigations (e.g. Wertsch, 1985b, p. 48). On the other hand, Vygotsky (1978) has also been critiqued for not being cultural enough in relation to his claim that biological and cultural lines intersect at about the age of two. Following research on how infants are encouraged to behave, Cole (1996) has argued that the cultural line of development is present from the time of a baby's first contact with other people.

2.3.3.4 Microgenetic Domain

Finally, in the study of the microgenetic domain, Vygotsky (1987) was interested in investigating how higher psychological functions were developed in a short period of time, as in an experimental session, and in particular, the training period prior to the actual experiment, or the processes involved in the construction of a single psychological act, such as the transitions from thought to speech.

2.3.3.5 Units of Analysis

2.3.3.5.1 *The Word*

The most important unit of analysis for the intellectual project that Vygotsky pursued was language, or the 'word' as an instance of the language used in speech. At this point it is important to reiterate that Vygotsky thought of culture mostly in terms of the emergence of language, as proposed by Engels, and not in terms of the emergence of social conditions of labour as proposed by Marx (e.g. Wertsch, 1985b). In addition, although Vygotsky initially followed Engels's emphasis on the study of semiotic mediation, his other important influence was the work carried out by the Russian

formalists, following authors such as Yakubinskii, who studied language in terms of its functions and who were a major source of reference for Vygotsky's (1971) "Psychology of Art". For instance, the formalists were mainly concerned with the different functions language serves, and in particular studied the difference between the practical and the poetic use of language. Vygotsky (e.g. 1934; 1960) extended this notion to study other functions in language, which he grouped in pairs, such as a) signalling vs. significative, b) social vs. individual, c) communicative vs. intellectual, and d) indicative vs. symbolic. From these functions he was particularly interested in the indicative versus symbolic function because of its affordances to characterise the comparison between contextualisation and decontextualisation in the use of language, pointing out the latter as a desired goal in the development of thought. Consequently, he proposed that scientific concepts, as the representation of the most developed type of verbal thought were the result of mastering the symbolic function which is characterised by a higher degree of decontextualisation in the use of language.

As described in sections 2.3.3.2 and 2.3.3.3, Vygotsky studied the indicative vs. symbolic functions of language in relation to the formation of categories by investigating how experimental subjects grouped objects according to several characteristics and the names that these categories were given when the objects had been grouped. He used the results of these studies to claim that the subjects studied developed more scientific categories when they used language in a more symbolic way, as discussed in relation to his interests of study in the phylogenetic and ontogenetic domains.

Although he also studied the more contextualised nature of the use of language in egocentric speech and inner speech, he did not emphasise enough the dialogical nature of language as he was more concerned with processes of categorisation than with the

study of the uses of language in other social situations, which he considered somewhat inferior as he linked these uses of language only to the emergence of spontaneous concepts, in contrast to the more desired scientific concepts that were linked, in his view, to schooling.

As a result, Vygotsky's account of the study of language has been called for revision to incorporate more recent developments in linguistics. For instance, Wertsch (1985b) has suggested that studies of propositional and discourse referentiality, should be taken into account importantly in the study of thinking, as a process that cannot be articulated in language as a reflection of reasoning processes without taking context into account. In other words, the analysis of intralinguistic and extralinguistic indexical relationships for the construction of meaning in language use, provides an account of how internal linguistic references (e.g. language cohesion) and extralinguistic objects (e.g. physical objects) play an important role in the use of language linked to situated reasoning.

Similarly, Vygotsky has been criticised for his logical model of reasoning which was not embedded in a dialogical notion of the use of language (e.g. Wegerif & Mercer, 1997a; Wertsch, 1985a, 1991). Wegerif and Mercer (1997a) argue that Vygotsky's theory of the relationship between language and thought was established in a logical and mathematical framework in a similar fashion as Piaget's conceptualisation of intelligence, as the increasing ability to perform formal logical operations. Moreover, Wegerif and Mercer point out that Vygotsky's proposal can be considered as monological as he conceptualised the use of language only as a medium to categorise the reality and to construct concepts, but not to engage in a dialogue with others. That is, for Vygotsky, reason was considered to be a self contained logical system where language and thought are equivalent in the formation of scientific concepts. According to Wegerif and Mercer, Vygotsky sums up this 'monological' vision in "Thought and

Language” as “the equivalence of concepts whereby pure concepts can be perfectly substituted one for another in the same way that numbers can be defined in different but equivalent ways in mathematics” (ibid., p. 51).

As a result, Wegerif and Mercer propose that as well as Vygotsky, thinking still needs to be considered as embedded in the use of language, but in contrast to Vygotsky’s original proposal, it is important to recognise that ways of thinking are embedded in ways of using language, and as such, language needs to be conceptualised “as a culturally elaborated tool used by people for thinking together –i.e. as a means for joint intellectual activity” (ibid., p. 51).

Similarly, Wertsch (1991) has also suggested that processes of dialogue were not recognised in its whole nature by Vygotsky and that in this respect, Bakhtin (e.g. 1981; 1986b) is a good alternative to the study of meaning in dialogue, taking also into account the historical nature of the constitution of dialogue as a process of interanimation of voices, which may be immediately present but also may have been uttered in a different time and place to the production of actual utterances. These ideas are linked to earlier claims made by members of the Russian formalist school that had already recognised the fact that language does not reflect inner thoughts in a neutral way, but refracts meaning as a result of the conditions of production of an utterance. That is, an utterance is both dialogical (e.g. is a response to others and an anticipation of what may be said afterwards), and situated in particular social practices determined by historical and ideological forces. In this respect, Voloshinov¹ (1986) describes how the individual psyche and ideological forces come into contact in the formation of an utterance:

¹ Although I am aware of the debate in relation to whether Bakhtin or Voloshinov were the real authors of some manuscripts (e.g. Holquist, 1994), in this dissertation I use the reference to those texts as they were originally published.

“In the verbal medium, in each utterance, however trivial it may be, this living dialectical synthesis is constantly taking place again and again between the psyche and ideology, between the inner and the outer. In each speech act, subjective experience perishes in the objective fact of the enunciated word-utterance, and the enunciated word is subjectified in the act of responsive understanding in order to generate, sooner or later, a counter statement. Each word, as we know, is a little arena for the clash and criss-crossing of differently oriented social accents. A word in the mouth of a particular individual person is a product of the living interaction of social forces... Thus, the psyche and ideology dialectically interpenetrate in the unitary and objective process of social intercourse.”
(p. 40-41)

Finally, in general, Vygotsky has been challenged for not developing enough his accounts of historical development and for not developing other units of analysis that could help to make this link between genetic domains that he tried to pursue, but that he failed to account because of his emphasis only on language use where context was defined in a rather underdeveloped way, in situations of “interindividual” interaction (e.g. Wertsch, 1991, p. 46). In other words, Wertsch argues that although Vygotsky tried to pursue a sociocultural analysis of the development of mind, informed by a Marxist framework, it is surprising that he did not rely on the analysis of other Marxist constructs such as class struggle and alienation to carry out such analysis (ibid., p. 47).

2.3.3.5.2 Activity Theory

I have already mentioned how members of the formalist group of literature analysis such as Voloshinov incorporated the study of ideology as part of the conditions of production of any utterance. Linked to this, the other critique of Vygotsky’s methodological proposal is connected with his main emphasis on the study of semiotic mediation, which was pursued in a way that failed to account for the conditions of production of mediated action, crucial for any sociocultural analysis of mind (e.g. Chaiklin & Lave, 1993). That is, his election of the ‘word’ as a unit of analysis of

mediated action was not used for him to establish the links between the sociocultural and the ontological domains of human action.

As a result, Leont'ev (1981) proposed that a more suitable unit of analysis to account for the sociocultural development of mind, or human consciousness, is the notion of activity:

“... the nonadditive, molar unit of life for the material, corporal subject. In a narrower sense (that is, on the psychological level) it is the unit of life that is mediated by mental reflection. The real function of this unit is to orient the subject in the world of objects. In other words, activity is not a reaction or aggregate of reactions, but a system with its own structure, its own internal transformations, and its own development.” (p. 46)

Leont'ev characterised human action as a tool mediated and goal oriented process which can be characterised in three levels, depending on the degree of attention or consciousness of the subject in the organisation of events: activity, action, and operation. For Leont'ev, activities can be identified on the basis of the motives that elicit them, actions on the basis of conscious goals that guide them, and operations by the conditions necessary to attain the goals, expressed generally as routinised behaviours.

Later on, Engeström (1990) proposed that given that human actions do not occur in isolation but embedded in a social and cultural context, the basic mediational triangle of human activity proposed by Vygotsky (1978) should be expanded to take into account the relationships between the subject and the community where responsibilities are organised and distributed (e.g. division of labour), through the uses of norms and social conventions (e.g. rules). The new expanded triangle is called by Engeström, an “Activity System”.

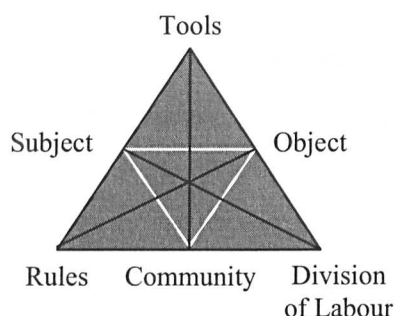


Figure 2.1. Expanded Activity Triangle or Activity System. Based on Engeström (1990).

Although there is a considerable debate about the functionality-based definition of its terms as part of an apparently static system, the strength of this conceptual model relies on the way context is conceptualised as a dialectical relationship between the elements of the system that can reveal the contradictions amongst them in the pursuit of goals that are historically and institutionally determined. Context is of greater importance in Activity Theory (AT), and some authors like Brown and Cole (2002) have even suggested that “a special virtue of the use of activity as an adjunct to, or substitute for, the concept of context is that it both focuses the attention to the historical dimension of the context/activity in question and allows a means of identifying crucial constituents of the phenomenon being investigated as they relate to each other” (p. 3).

2.3.3.6 Situated Approaches to Mind

More recently, the focus on the study of mediated action and its conditions of production as an extension of the study of the genetic development of mind, initially proposed by Vygotsky, have been elaborated by researchers interested in situated processes of learning and thinking in social practices. As a result, research in situated practices involves the study of persons acting as part of a socially material world where the activity in which they are engaged takes place, including the communities which they are members of, and the shifts in their participatory roles in such communities (e.g.

Lave & Wenger, 1991; Wenger, 1999). The study of situated practices, in contrast to cognitive theories of mind, involves the conceptualisation of learning and knowing as the engagement in changing processes of human activity, in contrast to static entities located in the head of participants. Learning is an expansion of understanding from immediate circumstances to wider social participation in sociocultural contexts. In addition, learning is assumed to take place in a network of different and specific goals, motives, and resources that varies across participants engaged together in activities, producing interdependencies, conflicts and relations of power. As a result, issues of identity are crucial to the study of situated practices. In sum, for Lave (1993), situated learning involves the continuous and active process of knowledgeability:

“Knowledgeability is routinely in a state of change rather than stasis, in the medium of socially, culturally, and historically ongoing systems of activity, involving people who are related in multiple and heterogeneous ways, whose social locations, interests, reasons, and subjective possibilities are different, and who improvise struggles in situated ways with each other over the value of particular definitions of the situation, in both immediate and comprehensive terms, and for whom the production of failure is as much a part of routine collective activity as the production of average ordinary knowledgeability. These interrelated assumptions run deeply through the work presented here [on situated practices]” p. 17

Moreover, the investigation of situated practices involves the ability to provide an account of how the conditions of production of social practices are both culturally determined and creatively recreated and challenged by participants in activities that are located socially (e.g. in interaction with others), and societally (e.g. in relation to institutions and historical traditions) in a specific context (Chaiklin, 1993). Hence, this goal for the research agenda in situated approaches to the study of mind calls for a discussion for the notion of context, as part of the analysis of such conditions of production. According to Lave (1993), the study of context from a sociocultural

perspective, involves at least two possible conceptualisations of the relationship between actors, cultural tools, goals, and institutions, amongst other factors that are intertwined in the constitution of what is meant by context:

“One [conceptualisation] argues that the central theoretical relation is historically constituted between persons engaged in socioculturally constructed activity and the world with which they are engaged. Activity theory is representative of such theoretical traditions. The other [conceptualisation] focuses on the construction of the world in social interaction; this leads to the view that activity is its own context. Here the central theoretical relation is the intersubjective relation among coparticipants in social interaction. This derives from a tradition of phenomenological social theory” (p. 17)

In a similar way, for Chaiklin (1993), a situated approach to the study of mind involves the analysis of the relationship between societal and social factors, that allows the construction of a scientific understanding of individuals engaged in practice and the conditions of such practices that may not be “immediately present in the situation, nor contained only in the persons acting in these situations” (p. 378). Moreover, according to Chaiklin (*ibid.*, p. 396), in any case, what is important for producing a sociocultural analysis of mediated action is the provision of a structural analysis (e.g. in AT terms, an analysis of the embedded levels of operation, action, and activity; in phenomenological terms, a structural analysis of language components), as well as a functional account of how practices are being created (e.g. in AT terms, the way in which motives, goals, and conditions of operation are achieved and constructed over time; in phenomenology, an account of language functions and discursive processes).

2.3.3.6.1 Starting with a Societal Analysis

From an AT perspective, as discussed in the previous section, this approach has been reformulated by Engeström, who proposed that the initial conceptualisation of context

developed by Vygotsky in the mediational triangle should be expanded to include other contextual elements such as rules, division of labour and communities. By doing this, human activities such as the practice of consultation in medicine (e.g. Engeström, 1993) are studied in relation to the conditions of production that make this medical practice possible, and the contradictions between different contextual elements that are conceived as impediments for the improvement of the activity system investigated.

In a related way, an analysis of how sociocultural context impinges in the conceptualisation of human activities is provided in the study carried out by Säljö and Wyndham (1993) in relation to how a situated practice in a class in mathematics can be characterised by the way students interpret a concrete action in terms of the definition of the activity in which they are engaged. Although they perhaps do not use the same terminology as Engeström, their framework very much resembles the three levels of activity that were originally proposed by Leont'ev in relation to three ways of conceptualising human agency in terms of activities, actions, and operations. Thus, Säljö and Wyndham analyse how the action of finding the correct postage for a letter according to a table, is carried out by students using different arithmetic operations, which varies according to the framing of the activity as a math lesson, a social studies exercise, or the everyday buying of a stamp in a postal office.

2.3.3.6.2 Starting with a Social Analysis

From a phenomenological perspective which is embedded in the study of the rules and methods of participants that informs an ethnomethodological approach, Edwards and Mercer (1987) have provided a very influential account of the discursive practices for the construction of common knowledge in UK classrooms. I would suggest that this research can be conceptualised as a pioneer study of the social practices of the use of language by teachers and pupils in British schools, which shows how participants were

influenced by a certain type of educational ideology (e.g. Piagetian principles, such as the promotion of active learning by discovery). In addition, following an ethnomethodological perspective, Edwards and Mercer also show how the conditions of production of common knowledge are not only provided by an institutional and cultural framework, but also they are constructed by the participants in linguistically mediated action. In other words, by using language, participants create their own context that gives meaning to the actions they are pursuing. Following this approach, Edwards and Mercer demonstrate how the construction of context is mental, and how this context is in turn constructed as a dialogical space of shared understanding between the teacher and his/her pupils constructed by means of discursive scaffolding, cued elicitations, elaborations, recaps, summaries, etc. that are based in the existence of educational ground rules that participants learn to follow. These ground rules have their origin in the influence coming from a Piagetian perspective that was embedded in the Plowden report, which informed the design of policies in the British educational system.

More recently, Mercer (1995) has proposed that the construction of intersubjectivity between participants is a guided process of engagement in educational dialogues where teachers and students construct meaning in a social way through educationally valued ways of using language. Also, knowledge is constructed by sharing context as part of conversations that take place in classrooms, and where the continuity of this process is established through the emergence and continuation of themes in dialogues where “explanations must be offered, accepted and revisited, and understanding must be consolidated” (p. 68). Consequently, the construction of knowledge is not only carried out in short periods of time but also in the course and development of ‘long conversations’ that take place across several lessons.

Moreover, educationally valued ways of using language can be conceptualised in group work as instances where exploratory talk is used, which is characterised as talk in which “partners engage critically but constructively with each other’s ideas” (ibid., p. 104). I will return to this particular issue when I describe the design of pilot study 1.

Another example of situated construction of mind starting from a social perspective, is the work carried out by Suchman (1993), and Hutchins (1991; 1995) in relation to the study of how complex systems of activity such as navigation of ships and aeroplanes, and artificial intelligence research, can only be carried out if it is distributed between agents and a set of tools that are arranged to accomplish together a goal. They call this process “distributed cognition”, because from a sociocultural perspective human mind can only be constituted in action in distribution with other artifacts, as a system where the affordances and constraints of cultural tools in combination with the skills of agents creates a system that, as a whole, pursues the achievement of goals that are institutionally valued. Similarly, Säljö (1995) discusses how mental and physical artifacts, as cultural tools used by agents in situated activity systems (e.g. Goodwin, 1997), can provide an account of learning and cognition as distributed between agents and mediational means:

“In such [situated activity] systems, cognition and learning have to be accounted for by analyzing a socially purposeful and situated activity which is maintained through practices that integrate physical tools and instruments, communicative (including cognitive) activities, rules and traditions of participant roles and contributions, and criteria of success and failure. Thinking will be understood as pursued in conjunction with artifacts, and the exact modes in which cognition and practical action are shared between actors and mediational means become objects of analysis rather than something that can be taken for granted by means of *a priori* restricting cognition to what takes place inside the heads of individuals.” (Säljö, 1995, p. 92)

2.3.3.6.3 A Synthesis

The analysis of context in the eyes of activity theorists and phenomenologists may have radical and contrasting points of view as to how the analysis should start:

“Those who start with the view that social activity is its own context dispute claims that objective social structures exist other than in their social-interactive construction in situ. Activity theorists argue, on the other hand, that the concrete connectedness and meaning of activity cannot be accounted by analysis of the immediate situation”. (Lave, 1993, p. 20)

However, what is important about the two approaches to the study of mind as a situated process of mediated action, is the problematization of the concept of context, a concept that was left underdeveloped by Vygotsky. In this respect, although activity theorists and phenomenologists have differences in the way context is primarily constructed, either as institutionally determined or interactionally accomplished, they converge in the sense that both are interested in historical accounts of mediation:

“The latter [phenomenologists] are beginning to recognize that immediate situations include historical artifacts, practices, and routines, and that historical practices and artifacts provide resources, interactionally, to be garnered and employed on next occasions”. (Suchman, 1993, quoted in Lave, 1993, p. 21)

Thus, according to Suchman, AT and ethnomethodology inform each other in producing more detailed accounts of context, human action, and the social and societal conditions of production for learning, participation, and dialogue, thus realising the goal that Vygotsky had set in relation to the sociocultural analysis of mind, and that was made explicit by Wertsch (1998) at the beginning of section 2.3.3.3 on the discussion of genetic development: “... to understand how mental functioning is related to cultural, institutional, and historical context” (p. 1).

2.4 Literacy: Decontextualised Skills vs. Contextualised Practices

In section 2.2, I discussed the changes that have emerged in literacy as a result of the introduction of ICT in education. Amongst these changes, I included the arguments of several researchers in relation to the emergence of a) new types of electronic documents, b) a multimodal arrangement of information, where visual literacy is taking a predominant role, c) a new set of skills required to search for information, and for reading and writing in different ways to the ones required when searching bibliographic cards, reading printed documents, and writing with pencil and paper, d) a convergence with subject area learning, and e) the growing need to be able to work collaboratively, both in face-to-face small groups, and in computer-mediated environments.

Although each of these features of the literacy landscape associated with ICT could be treated separately for research and pedagogic purposes, I also argued in section 2.2 in favour of a situated approach to literacy, in order to provide an account of the sociocultural context in which these features take place, as a situated practice.

Then, in section 2.3, I reviewed the implications of following a sociocultural paradigm as originated by Vygotsky and extended further by contemporary research, and I concluded by highlighting the importance of analysing the conditions of production of social actions and communicative practices, both as historically determined and interactionally accomplished in order to be able to provide a complete sociocultural analysis, and thus to be able to change literacy practices (if that is what is intended at the end), by changing such conditions of production, once it has been identified how they operate.

In the next sections, I will extend this discussion to illustrate how literacy has been conceptualised as a set of decontextualised skills, following a cognitive perspective that usually presents literacy as a process that is unrelated to the social and societal

conditions of production and use of texts, thus separating the study of literacy from the actual practices and the sociocultural contexts in which reading and writing take place. In contrast, I will discuss how the premises of a sociocultural paradigm, as discussed in section 2.3, can be applied to the research in literacy as it has actually been pursued by several researchers into what has been named the “New Literacy Studies” (e.g. Gee, 1990).

2.4.1 Literacy as a Decontextualised Set of Skills

According to the current literature on literacy, several authors (e.g. Gee, 1990; Heath, 1999; Nicolopoulou & Cole, 1999; Street, 1993b, 1999a) discuss how literacy has been traditionally conceptualised as the general ability to read and write. From this perspective, literacy has been conceived as a single general process, linked with decoding and encoding skills in relation to an abstract language system.

In turn, this ability has been related to the study of cognitive development, both at a societal and at an individual level. As a societal level, I discussed in section 2.3.3.2 how Vygotsky and Luria (e.g. 1976) thought of literacy as the appropriation of a formal semiotic system (e.g. the alphabet), in which language was learned to be used in a decontextualised way. They correlated this way of using language with the development of scientific concepts, which they thought were more advanced than everyday concepts linked to immediate contexts of use. They also extended this general claim to a sociohistorical account of the literacy skills of recently integrated citizens to the USSR who, coming from a rural illiterate background, were not able to categorise in decontextualised terms groups of objects that were named to them (e.g. a hammer, a saw, and a hatchet are all tools). Instead, they categorised these objects in terms of the situations in which they were usually found together, in everyday use (e.g. subjects said things like, “the log has to be here too”). Similarly, Luria and Vygotsky found that

illiterate subjects were not able to complete syllogisms expressed in verbal games of hypothetical situations (e.g. in the north there is snow and all the bears are white, Novaya Zemlya is in the north and there is always snow there, what colour are the bears there? To which illiterate subjects responded “I don’t know, there are different sorts of bears”). Although, Luria and Vygotsky attributed these results to the lack of literacy and instruction, their claims have been interpreted as biased in relation to the role of language mediating the construction of scientific concepts as an independent process of cultural influence (e.g. Cole, 1996; Scribner & Cole, 1981).

A similar claim in relation to the predominant role of literacy in the development of civilisation and rationality, without regarding as significant other societal conditions in this process, comes from the work carried out by Jack Goody (e.g. 1977; 1999) and Walter Ong (e.g. 1982). For instance, Goody proposed that the historical development of writing systems in societies, either as logographic, syllabic, or alphabetical scripts have important consequences for the emergence and consolidation of societies, through the institutionalisation of law, commerce, and schooling, the storage of information in libraries, the development of a sense of historical identity based on the construction of a cultural heritage, and finally as a “technology of the intellect”, which enables “individuals and cultures to expand the range of their activities, providing them with the means of access to the contents of the storage system and of adding to that knowledge store” (Goody, 1999, p. 31). In addition, for Goody, writing encourages the use of language for abstracting words from sentences and for creating categories, which in turn helps the emergence of logic in the form of syllogisms. This can be appreciated in the formalisation of the study logic as one of the greatest intellectual achievements of humanity that took place in Greece. The formalisation of logic as a discipline projected the Greek culture as one of the greatest civilisations, so that it actually gave birth to western culture in the way we know it nowadays. Finally, for Goody, writing also

enabled the institutionalisation of religions by means of the production of books such as the bible, that allow human groups to revisit these types of texts as the source of the principles and narratives that are the core of religious beliefs and practices.

In general, writing is treated by Goody and Ong as independent from social context, as if characteristics of texts could be treated independently of the time and place in which they were produced. For instance, for Goody (1968) "writing makes the relationship between the written word and its referent more general and abstract, it is less closely connected with the particularities of time and place than is the language of oral communication" (p. 40). Similarly, Ong (1982) develops this idea of writing as detached from everyday intercourse, when he mentions: "by isolating thought on a written surface, detached from any interlocutor, making utterance in this sense autonomous and indifferent to attack, writing presents utterance and thought as uninvolved in all else, somehow self-contained, complete" (p. 132)

Because of the nature of these assertions, as well as for the general implication of treating literacy as an autonomous variable which produces intrinsic consequences in society and individually, Street (1984; 1993a) has named this perspective an "autonomous model of literacy"

At an individual level, cognitive psychologists have also carried out research with an autonomous perspective in order to find out how internal processes and structures take place inside the mind of writers. In addition, cognitive psychologists have fitted these explanations into a general framework that follows a developmental perspective. For instance, Flower and colleagues (Flower, 1993; Hayes & Flower, 1980) have studied the process of writing as a problem solving task in which the writer has to meet several cognitive demands, often simultaneously, in order to construct a text. Their methodology include the analysis of thinking-aloud protocols of the processes

verbalised by subjects when they are writing, which they have classified in three main recursive cognitive procedures that lie at the core of skilled composition: a) planning (idea generation, organising, and goal setting), b) transcribing, and c) reviewing (evaluating and revising). Also, they have designed a pedagogy aimed to teach writers how to plan, generate and organise ideas, construct an argument, revising, and editing, all under the framework of specific cognitive tasks that need to be carried out, in many instances, recursively in order to solve the problem of constructing the text. In addition, according to the general principles of cognitive science, for Flower and colleagues these processes depend on the knowledge of the writer about the topic, the knowledge of the audience, and the rhetorical rules which are retrieved from long term memory.

Extending this model, Bereiter and Scardamalia (1987) proposed that writers can be categorised as novices and experts, according to the cognitive strategies they follow when they write. Thus, novices follow a telling-knowledge model which consists basically on saying what you know about a given topic. In contrast, expert writers follow a knowledge-transformation model which, similarly to the model proposed by Flower and colleagues, indicates that the writer makes several iterations of the cognitive processes required for completing the text according to the content space and the rhetorical space. Bereiter and Scardamalia used behavioural observation, self reports and text measurement for arriving to this conclusion. As well as Flower and colleagues, in both proposals there is not any reference to the possibility that culture and context could have an influence in the way writing is carried out, as this occurs solely inside the mind of the subject in an autonomous way to the social, material, and institutional conditions of production in which the writing takes place.

Following also a cognitive approach in developmental psychology, Olson (1977) proposes that “when writing began to serve the memory function, the mind could be

redeployed to carry out more analytic activities such as examining contradictions and deriving logical implications. It is the availability of an explicit written record and its use for representing thought that impart to literacy its distinctive properties" (p. 281). Thus, Olson sees writing as an additional device for expanding the memory storage that cognitively the writer has in order to refine the expression of his/her thought. Nevertheless, Olson establishes an important dichotomy between oral and written forms of communication, where writing is seen as a more advanced way of representing meaning because of the possibility of leaving out the ambiguity that is more evident in oral uses of language. Hence, Olson (*ibid.*) has argued that: "there is a transition from utterance to text both culturally and developmentally and that this transition can be described as one of increasing explicitness with language increasingly able to stand as an unambiguous and autonomous representation of meaning" (p. 258).

More recently, however, Olson (1994) has indicated that the differences that he pointed out earlier in his work between the oral and written modes of communication are no longer tenable, and that the grand claims of the consequences of literacy in cognition as if they were autonomous need to be revised: "Rather than take as fundamental the autonomy of textual meaning, I now take as fundamental that the text provides a model for speech: we introspect our language in terms of the categories laid down by our script" (p. xviii) In addition, according to Olson (*ibid.*), this requires "a quite different analysis of the conceptual implications of literacy; writing is largely responsible for bringing language into consciousness". Finally, Olson (1996) proposes that the aspects of language that are introspected with the acquisition of literacy are sentences, words, and phonemes, that make possible the notion of literal meaning. In this respect, despite the change of position taken by Olson, the notion of action in the use of language, its social nature embedded in dialogue, and its conditions of production in different sociocultural contexts, are not contemplated in this approach.

In summary, the research presented in this section has been conceptualised by Street as an autonomous model of literacy, which can be contrasted with the emergence of an ideological model of literacy characterised by a social and dialogical nature embedded in the “New Literacy Studies” that I will describe next.

2.4.2 Literacy as a Contextualised Social Practice

One of the first studies in which the conception of the autonomous model discussed in the previous section was challenged was the study carried out by Sylvia Scribner and Michael Cole in 1981, which I also mentioned in section 2.3.3.2 in this chapter. Scribner and Cole investigated whether the effects attributed to literacy were itself a result of learning how to read and write, or whether they were in fact a result of wider sociocultural conditions of education as embedded in formal schooling. For that purpose, they studied the literacy practices carried out by the Vai in Liberia who used three scripts for writing: Arabic, English, and an indigenous syllabic script they created, the Vai script. Arabic was mainly used for religious purposes, such as to learn verses in the Qur'an, Vai was used to record commercial transactions and write personal letters, and English was the language used for teaching and learning in school. Scribner and Cole tested the cognitive effects of subjects that were literate in one, two, or three of these scripts, and also in illiterate subjects. If literacy per se was responsible for the development of cognition, then literate subjects in either Arabic, Vai, or English would have to have the same possibility of cognitive development associated to the acquisition of literacy. However, Scribner and Cole only found higher levels of cognitive development in subjects that were literate in English, and consequently, those who had attended formal schooling. As a result, Scribner and Cole were able to prove that the effects attributed to literacy itself, as the mastery of a semiotic system, were in fact related to schooling. Moreover, they also found that given that different languages were used for different purposes, rather than speaking of a single monolithic literacy,

following the results they obtained, it was proposed that it was preferable to talk about multiple literacies in the sense that different social tasks were carried out with different written languages. That is, Scribner and Cole concluded that it was more adequate to describe literacy as a social practice rather than a linguistic code, a perspective that had been taken by researchers following an autonomous model to the study of literacy.

In similar studies aimed to understand how literacy was used as a social practice in different communities, Heath (1983) investigated the different 'ways with words' with which members of three communities usually got engaged in literacy events. The first community, Roadville, was constituted by working class white population, where parents read books to children, particularly in the bedtime story literacy event. During the bedtime story event, parents usually discussed the content of the stories presented in books in terms of actual facts and real situations. This was a practice grounded in the strict moral values of this community, which saw as a lie any deviation of what was written in a text.

Another community, Trackton, was constituted by working class black population. In this community, oral events and imaginative accounts were abundant and the use of books was very scarce. When literacy events took place, books were read aloud, but adults did not believe that they could have a tutoring role in order to frame the content of the book adjusting it to different situations. Children were expected to make connections by themselves, leaving the situation in a sort of undifferentiated interpretation.

The children in both Roadville and Trackton failed at school because their styles of interaction with texts did not match the type of literacy events privileged in formal schooling. In contrast, the children coming from Maintown were successful in school because they were better adjusted to the school literacy events that were not that

different to the ones into which they were socialised at home. Thus, as well as in Roadville, in Maintown homes parents read books to their children using linguistic scaffolding to help make sense of the content. However, in contrast to Roadville's literacy events, the use of scaffolding by Maintown's parents favoured the recontextualization of accounts, extending the content of the book to other situations, commenting similarities and differences between the book and other scenarios, including imagined situations. In this respect, both Maintown and Trackton favoured imagination, although in Trackton parents only used it in oral practices, and not in giving scaffolding to their children in literacy events. In general, parents and teachers in Maintown promoted reading in a way that helped children to understand what was written in a text, and to make meaningful connections with other contexts, thus helping children to develop recontextualisation processes that in turn, helped them to learn how to shift frames in schools, and to develop analytic reasoning skills valued in formal education. These skills were not developed by Roadville's or Trackton's children, who came from homes where literacy events disregarded recontextualisation, and where parents framed reading only in an experiential, non-analytic way, favouring, if at all, only single interpretations of the contents of books.

Finally, in relation to how to promote the appropriation of mainstream 'ways with words', Heath suggested that schooling is productive if students have been socialised at home into these mainstream practices, but is not sensible and flexible enough to detect and transform previous literacy practices. In that respect, Heath proposed that what is required is the re-socialisation of home literacy events, recapitulating the process from the point where literacy events started to diverge from home and school.

In a similar way, studying literacy as a social practice, Scollon and Scollon (1981) investigated the different cultural models implied in the use of language of Athabaskans

and mainstream Canadians. In particular, they studied discourse patterns in speaking and writing as strong expressions of personal and cultural identity. Documenting the communicative practices of these two cultural groups, they found important differences between Athabaskans and Canadian English speakers. For instance, Athabaskans would prefer silence instead of dialogue if the point of view of the others was not known. Also, they would prefer to be discreet in their social actions if they were in a subordinate situation, and to observe how to do things from people in a superordinate position. In contrast, English Canadians would use language to get to know the opinion of other people and thus, they would privilege dialogue over silence. In addition, in the mainstream Canadian society, novices were expected to show off newly acquired skills, particularly in formal educational settings. These differences are not problematic themselves, except for the fact that each group stereotyped each other, so that Canadians thought of Athabaskans as reserved and unskilled, and Athabaskans considered Canadians to be careless and far too talkative.

However, problems arose when Athabaskans attended mainstream Canadian schools where the models of text production are closely associated to the discourse patterns of mainstream Canadian society. More specifically, in the production of essayist literacy, the cultural identity of Canadians matches the expectations of the identity required as an author of these academic texts, which demand a major display of knowledge to an unknown audience. For the Athabaskans, to get engaged in academic literacy practices, such as writing essays, is a major threat to their cultural identity. First, they are not suppose to show off what they know, unless they are sure that they are in a superordinate position, which in this case they are not as students subordinate to a lecturer in a classroom. Second, academic writing conventions imply the use of rhetorical devices who depict both the writer and the reader in abstract terms; thus, in cases where speakers do not know each other, silence is preferred in Athabaskan

culture, making things even more complicated for an Athabaskan writer in the school system.

Finally, the Scollons found other discourse patterns that did not match between the cultural identity of Athabaskans and the new identity they were required to display in formal schooling. Narratives and riddles are important communicative practices for Athabaskans, which represent the ability to make interpretations, guess meanings, and read between the lines. These communicative practices also represent the opposite of the rhetorical strategies privileged in Canadian (and other Anglo American) academic environments, which require the expression of meanings in a scientific, non ambivalent, and almost 'literal' way for the reader.

In summary, Street (e.g. 1984; 1993a; 2000) has proposed that the type of studies discussed in this section (including his own ethnographic account of commercial, Qu'ranic and commercial literacies in Iran) represent an ideological model of language use. In this model, literacy is viewed as a social practice embedded in ideological forces and relations of power, and where the conditions of production of communicative and literacy practices matter. In this respect, Street (1997; 1999b) has argued that an ideological model of literacy implies that literacy is social and dialogical.

Literacy is social, because it takes place in a social context, and thus is subject to variation with regard to the cultural norms and discourses that are invoked in the construction of identity, gender, belief, and power. It is also social with regard to the way different semiotic resources are combined in the production of meaning, as a design process which is carried out in situ, and which is also subject to social conventions in relation to what is considered appropriate for a given discursive community (e.g. Kress & van Leeuwen, 1996; Lemke, 1998; New London Group, 1996)

Literacy practices are also dialogical, conceptualised as an interactive and dynamic process of meaning construction embedded in a dialogue with others. That is, language is always used in social interaction where meanings are negotiated, contested, and interpreted in particular situations (e.g. Halliday, 1978; Hymes, 1972a, 1974; Voloshinov, 1986). Bakhtin (1981) also followed this perspective conceptualising utterances as a site of struggle where language is remade according to the demands of the situation and the constraints and affordances of language as a system:

“Every concrete utterance of a speaking subject serves as a point where centrifugal as well as centripetal forces are brought to bear. The processes of centralization and decentralization, of unification and disunification, intersect in the utterance; the utterance not only answers the requirements of its own language as an individualized embodiment of a speech act, but it answers the requirements of heteroglossia as well; it is in fact an active participant in such speech diversity. And this active participation of every utterance in living heteroglossia determines the linguistic profile and style of the utterance to no less a degree than its inclusion in any normative-centralizing system of unitary language.” (p. 272)

By using the term heteroglossia, Bakhtin emphasises the primacy of context over text, a perspective that establishes that the meaning of an utterance can only be understood by reference to its conditions of production, as a matrix of forces, whether they are historical, social, meteorological or physiological, all interacting to produce a particular situation in which a given utterance is meaningful. Hence, following Bakhtin, Street (1999b) proposes that the challenge for those researching and teaching language and literacy is “to take into account this heteroglossic character and to acknowledge the centrifugal as well as the centripetal forces at work in any utterance or occasion of language use” (p. 11).

2.5 Conclusion

In this chapter I have discussed the implications of the introduction of ICT in literacy practices, arguing for the need to study the changes literacy has undergone by taking a sociocultural approach to the way participants get engaged in events where language and other cultural tools are used to make meaning and achieve social goals. I reviewed the main principles that inform a sociocultural approach as originated by Vygotsky and elaborated further by contemporary researchers. In particular, I emphasised the social origin of all psychological functions, the mediated nature of human action, and the genetic and historical perspective in the study of human development. Following these principles, researchers have developed methodologies to study human learning and knowing as situated practices, where the main aim is to provide an account of the conditions of production of human action, whether these are historically determined and/or interactionally accomplished.

Similarly, I went back to the discussion of literacy, first as a set of decontextualised skills where context is not taken into account, so that literacy is conceived as a variable autonomous from other social factors having an impact in the development of civilisations and individuals. Finally, in contrast, I discussed what is meant by an ideological model of literacy, where reading and writing is conceptualised as a social practice that takes place in a sociocultural context. In this respect, I discussed how, following Bakhtin, the main challenge for research in literacy is to provide an account of the heteroglossic nature of language use, which is the same position taken in the study of situated practices in relation to learning and knowing: to provide an analysis of the conditions of production of human action, and in this case, of language as a tool for producing situated meanings.

In the next chapter, I will discuss how I used this framework in two pilot studies. In the first one, I studied the variations of language use when children solved problems together as part of the Raven's Progressive Matrices test. In the second study, I investigated the way language was used to construct meaning in a variety of literacy events where a small group of children constructed several electronic documents such as e-mails, concept maps, and WebPages.

CHAPTER 3. PILOT STUDIES

3.1 Introduction

Following a sociocultural approach, in this chapter I will present two pilot studies that were carried out in order to find out how language was used as a tool for constructing knowledge in interaction. Hence, both studies are concerned with variation of language use in situations that involved collaboration, either between peers, or between peers and an adult providing guidance for accomplishing certain tasks. In the first study, using the exploratory talk approach (e.g. Mercer, 1995, 1996; Mercer & Wegerif, 1999; Mercer, Wegerif, & Dawes, 1999; Wegerif & Mercer, 1997b, 2000; Wegerif, Mercer, & Dawes, 1999; Wegerif, Rojas-Drummond, & Mercer, 1999), I investigated how language was used by a small group of primary school children in Mexico when they were tackling together the solution of a set of problems taken from the Raven's Standard Progressive Matrices test (RSPM). In this study, it was found that the variation in language use, as categorised by the three different types of talk proposed in this framework (i.e. exploratory, cumulative, and disputational), was not only a function of the dialogical orientations of the participants towards the task, but was also related to the degree of difficulty of the problem they were trying to solve.

In the second study, I investigated the variations of the use of language according to the engagement of a small group of Year 5 students in the UK in the construction of 3 different types of text. Using a longitudinal design, the children were studied along 10 sessions of attendance to the "literacy hour", in their primary school. In this study, it was found that language was used to negotiate meanings of texts in different "literacy events" that constituted different emergent literacy practices. However, despite these differences, following Heath (1983) and the New Literacy Studies (NLS) (e.g. Gee,

1990; Street, 1984, 1993a, 1997), it was noted that such events could also be evaluated by the nature of the contextual connections established in interaction, which helped the children to make sense of the situation and to appropriate in different degrees the literacies related with the affordances of each type of text.

3.2 Pilot Study 1²

The linked concepts of 'scaffolding' and the Zone of Proximal Development are central to many recent accounts of teaching and learning that follow a sociocultural approach. Bruner (1978) describes 'scaffolding' as cognitive support given by teachers to learners to help them solve tasks that they would not be able to solve working on their own. He goes on to describe this as a form of "vicarious consciousness" in which students are taken beyond themselves through participation in the consciousness of the teacher. This conception of 'scaffolding' is closely related to Vygotsky's concept of the Zone of Proximal Development (ZPD), which is described in Vygotsky's own words as:

The distance between the actual developmental level as determined by independent problem solving and the level of potential problem solving as determined through problem solving under adult guidance or in collaboration with more able peers. (Vygotsky, 1978, p. 86)

In the next sections, I will explore in more detail how these two concepts have evolved in contemporary sociocultural research.

3.2.1 The Zone of Proximal Development (ZPD)

In Vygotsky's original work (e.g. 1978; 1987) the ZPD is offered as a dynamic alternative to the models of individual ability used in conventional psychological testing. Instead of assessing what an individual child can do unaided, Vygotsky

² A modified version of this study has been published as part of the article "Re-conceptualising "scaffolding" and the Zone of Proximal Development in the context of symmetrical collaborative learning". (See Fernández, Wegerif, Mercer, & Rojas-Drummond, 2001).

proposed assessing what an individual was capable of with the help of an adult or teacher. He hypothesised that children who might have reached similar levels of conceptual development might nevertheless differ in their potential or readiness to achieve higher levels of understanding, and such differences would be revealed by offering children structured help. As with so many of Vygotsky's interesting ideas, however, it has been left mainly to others to explore the implications and potential of the ZPD for psychological and educational research.

For instance, Rogoff (1990) has taken the ZPD to be a key element in the culturally based process of learning, whereby children appropriate knowledge and skills from more expert members of their society. In this formulation, the ZPD is precisely that dynamic region in which the child develops through participating in the solution of problems with more experienced members of his or her cultural group. As discussed in section 2.3.1, Rogoff's thesis is that the development of the child towards more able ways of participation in society is carried out through a process of guided participation, which may or may not include explicit teaching.

Wertsch (e.g. 1985a; 1981) has applied the concept of the ZPD to the analysis of language of interactions between teachers and learners. He describes how a teacher, parent or more capable peer offers directions or modelling to the child, which the child responds to in an imitative way. Similarly, researchers working in classroom contexts have described how a teacher can enable a learner to understand and complete a task using linguistic 'scaffolding tools' such as questions, feedback, and explanations of the structure of the task (e.g. Maybin, Mercer, & Stierer, 1992; Mercer, 1995).

Also, drawing on school-based research, Newman, Griffin and Cole (1989) argue for a reformulation of the concept of the ZPD, suggesting that it needs to be expanded beyond the individual and asymmetrical focus found in Vygotsky. They employ the

concept in a more general sense to designate the space or 'construction zone' where culture and cognition create each other. Through 'symmetrical' interactions, they suggest, children can appropriate ways of understanding that are a result of their efforts to apply the tools of their culture. In this way, the culture is regenerated by the efforts of learners as they work together to use and adapt the tools provided by their ancestors. Interactions within the ZPD are considered by these authors as the generators of development and culture, in the sense that such interactions give to each child the opportunity to participate in activities and goals that would be very difficult for them to achieve alone.

3.2.2 'Scaffolding'

Wood, Bruner and Ross (1976), introduced the notion of 'scaffolding' as a metaphor for the way an expert 'tutor' (such as a parent) can support a young child's progress and achievement through a relatively difficult task. They describe six functions of the tutor in scaffolding of the activity of the child (summarized here in paraphrase):

1. To orientate the child's attention to the version of the task defined by the tutor.
2. To reduce the number of steps that are required to solve a problem, thus simplifying the situation in a way that the learner can handle the components of the process.
3. To maintain the activity of the child as she/he strives to achieve a specific goal, motivating her/him and directing her/his actions.
4. To highlight critical features of the task for the learner.
5. To control the frustration of the child and the risk of failure.
6. To provide the child with idealized models of required actions.

As mentioned earlier, 'scaffolding' was described by Bruner as a "vicarious consciousness", a temporary intellectual support which a teacher offers in order to draw the learner up towards a higher level of understanding. This formulation appears to

assume a prior understanding of the solution of a problem, or a conception of the ideal outcome of a task, on the part of the person providing the 'scaffold'. This is problematic if such a prior understanding of the task is not fulfilled, or if there is not a person in a recognised tutoring role participating in the task, as in many cases occurs in interaction between peers. As a result, alternative concepts dealing with the characterisation of joint construction of knowledge have been proposed more recently. One of these concepts is the Intermental Developmental Zone, which I will discuss next.

3.2.3 The Intermental Development Zone (IDZ)

Drawing on both the concepts of 'scaffolding' and the ZPD, Mercer (2000) has proposed that a new concept may be useful for understanding how interpersonal communication can aid learning and conceptual development. He calls this concept the Intermental Development Zone (IDZ). This concept is meant to capture the way in which the interactive process of teaching-and-learning rests on the maintenance of a dynamic contextual framework of shared knowledge, created through language and joint action. This contextual frame supports the mutual orientation of participants to a shared task, and in the case of a productive interaction between a teacher and learner, this frame will be finely attuned to the extent of the learner's changing understanding as the activity progresses. The concept of the IDZ focuses on the nature of the communicative process whereby the "vicarious consciousness" of Bruner's conception of 'scaffolding' is actually realized. In addition, unlike the original ZPD, the IDZ is not a characteristic of individual ability but rather a dialogical phenomenon, created and maintained between people in interaction. The IDZ embodies the following claims which may be relevant to symmetrical as well as to asymmetrical teaching and learning:

- a) any joint, goal-directed task must involve the creation and maintenance of a dynamic, contextual basis of shared knowledge and understanding;
- b) language use during joint activity both generates and depends on the creation of this contextual framework; and
- c)

the success of any collaborative endeavour will be related to the appropriateness of the communication strategies participants use to combine their intellectual resources.

I will explore these ideas later in this chapter using empirical data of children working together in small groups.

3.2.4 Exploratory Talk

Drawing on a sociocultural approach, and also influenced by pioneer researchers in applied linguistics to the study of social interaction in classrooms such as Barnes and Todd (e.g. 1978; 1995), Neil Mercer and colleagues have developed the concept of exploratory talk in studies in the United Kingdom (e.g. Mercer, 1995; Wegerif, Mercer et al., 1999) and in Mexico (e.g. Rojas-Drummond & Fernández, 2000; Rojas-Drummond, Pérez, Vélez, Gómez, & Mendoza, 2003; Rojas-Drummond, Vélez, Gómez, Mendoza, & Pérez, 2001). Mercer starts from the Vygotskian idea that knowledge is constructed using language, as a tool for “thinking together”. In classrooms, the construction of knowledge is mediated by dialogues, which take place in specific activities such as small-group discussions and teacher-led plenary sessions. Also, following Edwards and Mercer (1987), dialogues are socioculturally determined by the existence of “educational ground rules” of participation and use of language. Thus, the way children speak in lessons and answer questions from teachers follows these “ground rules”. For instance, students know when the teacher is trying to engage them in a “cued elicitation” event (p. 142-146), and they behave consequently in this kind of language game trying to guess what the teacher is aiming to teach or communicate. Similarly, when children participate in small-group discussions they follow ground rules for the conversation, which are informed by previous encounters with peers. These conversations, however, might not represent educationally desired dialogues in the sense that very little principled knowledge might be made explicit when

they talk to each other in order to solve a problem, write a text, interact around the computer, etc. (Mercer, 1996). However, despite being in a minority, some of these conversations do make knowledge explicit; through careful discourse analysis, a pattern of talk can emerge. This was the case of the SLANT project where, looking at more than 50 hours of video recordings, Mercer and colleagues (Mercer, 1995, p. 98) found that the type of talk that made knowledge explicit in conversations of small groups seemed to be regulated by a particular set of rules of language use. This pattern of talk was named “exploratory talk”, and the most recent definition of it is:

Exploratory talk is that in which partners engage critically but constructively with each other's ideas. Relevant information is offered for joint consideration. Proposals may be challenged and counter-challenged, but if so reasons are given and alternatives are offered. Agreement is sought as a basis for joint progress. Knowledge is made publicly accountable and reasoning is visible in the talk. (Mercer, 2000, p. 98).

The rules that have been identified informing this type of talk are, in its most recent version for educational purposes in the UK (Mercer, Wegerif, Dawes, Sams, & Fernández, in press, p. 7):

- All relevant information is shared
- People give reasons for their ideas and opinions
- People can challenge one another's proposals (if they feel they have good reason)
- Alternatives are discussed before a decision is taken
- All in the group are encouraged to speak by other group members
- The group seeks to reach agreement, and takes joint responsibility for decisions

In addition, two other types of talk have been characterised. On the one hand, cumulative talk is defined as instances where speakers build positively but uncritically

on what the other has said; it is characterised by repetitions, confirmations, and elaborations. On the other hand, disputational talk is characterised by disagreements and individualised decision-making, and short assertions and counter-assertions (Mercer, 1995).

These three types of talk have been conceived as three social ways of thinking, which in turn reflect different dialogical orientations (Wegerif, 2004, p. 8; Wegerif & Mercer, 1997a). Cumulative talk reflects an orientation towards a group identity with sharing and a desire to understand each other but without any critical challenges. Disputational talk reflects an orientation towards individualised identity so that argument is seen as a competition which each seeks to win. Exploratory talk is oriented beyond group or individual identity towards the process of shared inquiry so it allows critical challenges and explicit reasoning within a co-operative framework.

Finally, from a pedagogical perspective, in the SLANT project it was noted that naturally occurring, not many of the episodes of small-group talk seemed to follow these rules. Therefore, trying to find ways to improve the explicitness of the talk for educational purposes, Mercer, Wegerif and Dawes (2000) designed a programme to teach these rules as part of a set of lessons with the general aim to make the children aware of the features of exploratory talk, and to institutionalise the use of its associated ground rules as a common practice in small-group interaction. Results from various research projects following this intervention programme indicate that there is a positive correlation between the type of talk and the quality of the reasoning as measured by the RSPM test (e.g. Mercer et al., 1999; Rojas-Drummond et al., 2003; Wegerif, Mercer et al., 1999). However, in this study, the aim is to find out the variations of the use of these three types of talk in a more detailed way, by analysing the performance of a small

group of children before and after the intervention programme where the ground rules of exploratory talk were taught.

3.2.5 Method

This study focuses on the talk of a group of 3 children as they attempted to solve the RSPM test. The group consisted of 2 boys and one girl, of 9 and 10 years old from a 4th grade class of a state primary school in a low socio-economic status area of Mexico City. With the help of the teacher, this triad was selected for video recording as being representative of the range of ability in that class. The children had participated in a four-month programme for promoting the use of exploratory talk as a tool for joint reasoning (see Rojas-Drummond & Fernández, 2000). Training consisted of nine one-hour sessions where children were encouraged to use the “ground rules” for exploratory talk while working together, so that they could jointly negotiate alternatives for solving diverse problems and make their reasoning more visible to others.

For the sake of the study, the full sixty questions of RSPM test were divided into two different 30-question tests of equal difficulty. One of these reduced ‘matched’ versions of the test was administered to the groups at the beginning of the programme, and the other at the end, following procedures described in detail in earlier studies (Wegerif & Mercer, 1997b). Each of these versions of the RSPM test consisted of 5 sets of problems, increasing in degree of difficulty from set A to set E. For the triad presented here, the video-recordings of their performance for the RSPM test before and after the programme were transcribed, writing down the dialogues and actions that took place for each problem or ‘matrix’ they tackled. All the matrices were then analysed to determine whether the type of discourse could be classified as mainly exploratory, disputational, or cumulative in each case. In doing so, the following categorical descriptions were used, which were designed to reflect the situated nature of the task in question:

	Type of talk		
	Cumulative	Disputational	Exploratory
Qualitative Criteria for classifying the talk	Addition of ideas without arguments. Group members propose options one after another without explaining the reasoning for their choice of specific answers. Members try to be friendly and to avoid conflicts.	Contraposition of ideas without arguments. Group members each propose options, challenging others without providing reasons for their own choice of answers. Members try to impose their own viewpoints.	Exposition of ideas and arguments. Group members explore different options and give reasons for suggestions. They talk about the sequences of figures, pointing out the relevant characteristics of the matrices. Members try to collaborate and to understand each other's points of view.

Table 3.1. Situated descriptions for categorising the talk of groups of children attempting problems of the Raven's Standard Progressive Matrices Test.

3.2.6 Results

3.2.6.1 Correct matrices by scale in pre-intervention test

The distribution of matrices answered correctly by the Mexican triad by scale in the pre-intervention test is presented here, in order to show how the children found the degree of difficulty of the matrices by scale before the intervention programme.

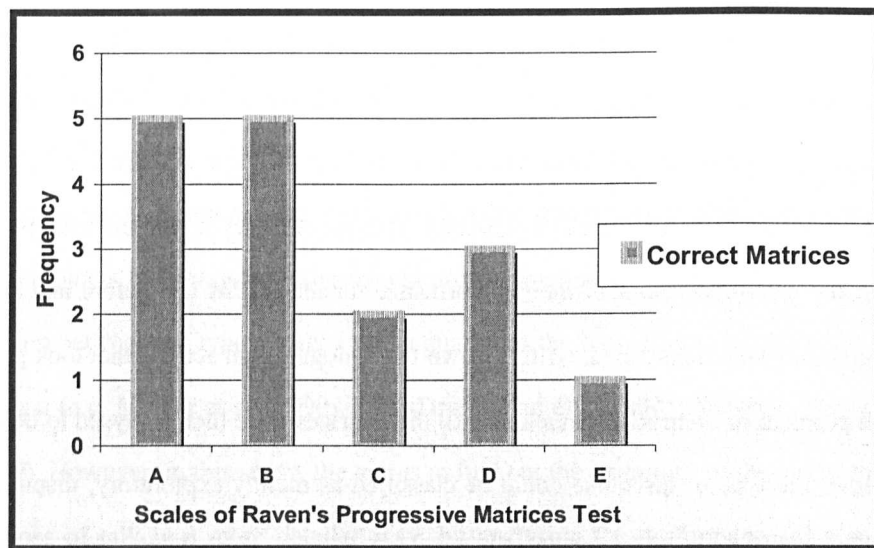


Figure 3.1. Correct matrices by scale in pre-intervention test

As it can be seen in Figure 3.1, children performed better on the problems involved in scales A and B (the easiest) answering 5 of 6 matrices correctly; less so on scales C and D, answering correctly 2 and 3 matrices respectively; and had a very poor performance on scale E (the most difficult), answering correctly just one matrix. In total, the children answered correctly 16 matrices out of 30.

3.2.6.2 Type of talk by scale in pre-intervention test

On the basis of the categorical descriptions for analysing the matrices in the pre-intervention performance of the triad (shown in Table 3.1 above), Figure 3.2 presents the variation of the children’s talk through the problem sets A-E that constituted the RSPM test.

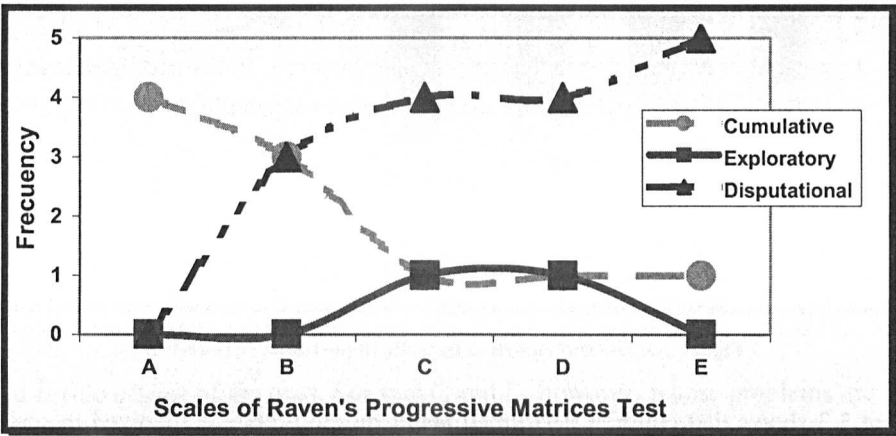


Figure 3.2. Types of talk by scale in pre-intervention test

In Figure 3.2, it is possible to see that the triad tended to use cumulative talk when solving problems in set A. For set B, consisting of problems that were a little more difficult, the children used cumulative and disputational styles in the same proportion. As the degree of difficulty increased yet again through sets C and D, children began to use more disputational talk and, at the same time, to reduce their use of cumulative talk. The children also showed for the first time in the test an incipient use of exploratory discourse to solve one matrix in each set C and D. In set E, which consisted of the most

difficult problems of the test, they attempted 5 out of 6 matrices using a disputational style of interaction. Finally, for the remaining matrix, they used a cumulative type of talk. They used no exploratory talk at all for this set.

3.2.6.3 Correct matrices by scale in post-intervention test.

Next, the distribution of matrices answered correctly by the Mexican student triad by scale in the post-intervention test is presented, in order to show how difficult the children found the matrices by scale once they had acquired the linguistic tools of 'exploratory talk' taught during the intervention programme.

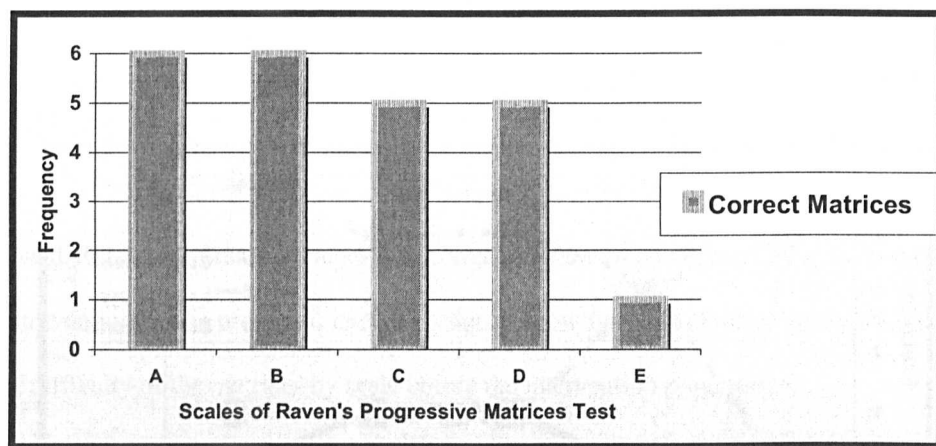


Figure 3.3. Correct matrices by scale in post-intervention test

Figure 3.3 shows that children performed better on the problems involved in scales A and B (the easiest) answering correctly all the matrices in this scale. Just below of the level of performance for scales A and B, children answered correctly 5 of 6 matrices in both scales C and D; whereas they had a very poor performance on scale E (the most difficult), answering correctly just one matrix. In total, this group of children answered correctly 23 matrices out of 30.

3.2.6.4 Type of talk by scale in post-intervention test.

The next graph (Figure 3.4) illustrates the frequencies observed for each type of talk displayed by the same triad in their post-intervention performance of the test. As it was shown in the pre-intervention performance of this group of children, they found the sets of problems from A to E of increasing difficulty; and they adjusted their type of talk accordingly.

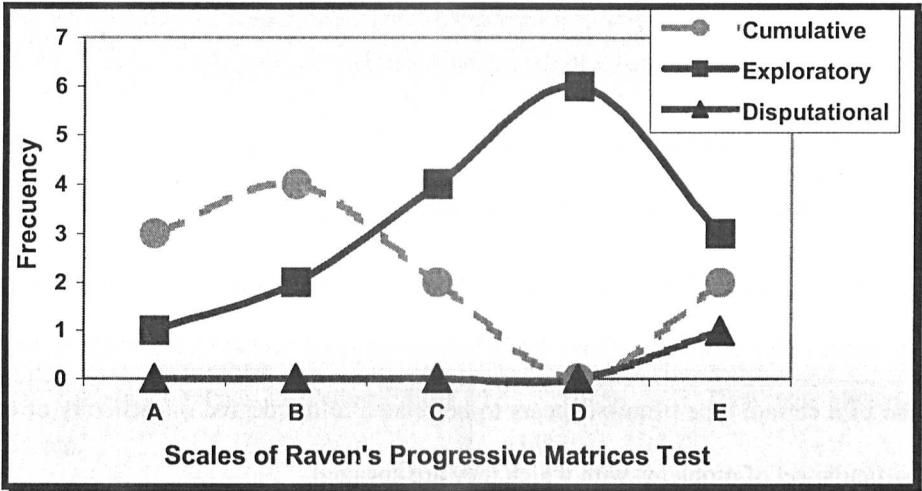


Figure 3.4. Types of talk by scale in post-intervention test

The triad showed a preference for using cumulative talk when solving problems in sets A and B (the easiest of the test). For sets C and D, however, whose problems are more difficult, they substantially decreased the use of cumulative talk and increased their use of exploratory talk. The children changed their style again when dealing with set E (the most difficult problems of the test) by diminishing their use of exploratory talk and increasing their use of cumulative talk. At the same time, it is also possible to see the first appearance of disputational talk for this more difficult scale.

3.2.6.5 Comparing performances in pre-test and post-test.

Comparing performances in the pre-intervention and post-intervention tests (see Figures 3.1-3.4) for this triad, the following interesting features of variation can be noticed, both in the scores obtained, and in the talk used before and after the intervention programme:

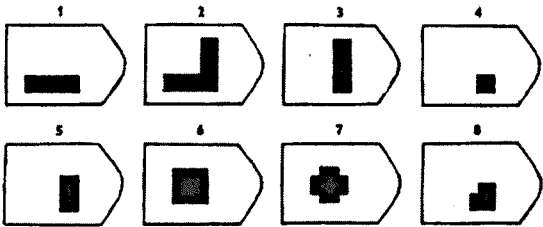
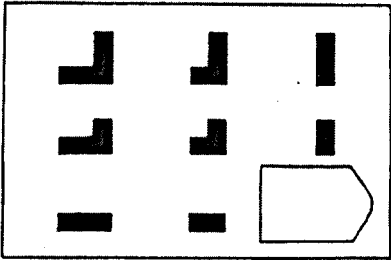
- a) The children improved their score in 43.75% from the pre- (score = 16) to the post-intervention (score = 23) tests. From the 7 new matrices that were answered correctly in the post-intervention test, it was found that 5 of these corresponded to the scales C and D, and just 2 to the scales A and B.
- b) There is a predominance of a disputational type of talk in the pre-intervention test and a predominance of an exploratory type of talk in the post-intervention test.
- c) The curve that describes the use of exploratory talk along the test appears or increases in the same sets (C and D) in both measures. In other words, the children's use of a certain type of talk appears to be related to the degree of difficulty of the particular set of problems with which they are engaged.

These three observed features suggest that the intervention programme was effective in teaching the ground rules of exploratory talk, since there was an increase in the use of this type of talk in the children's post-intervention performance. It also appears that their increased use of exploratory talk was effective in helping them solve the Raven's problems, particularly for sets C and D.

In further support of these findings, the transcript of one of the matrices that was answered incorrectly by the triad in the pre-intervention test in the set C is presented, followed by the transcript of an isomorphic matrix in the same set, which was answered correctly by the same children in the post-intervention test. This matrix was chosen from the 7 isomorphic matrices that were answered correctly in the post-intervention test compared to the performance of the triad in the pre-intervention test.

Transcript 3.1. C6 / Pre-intervention test

C6

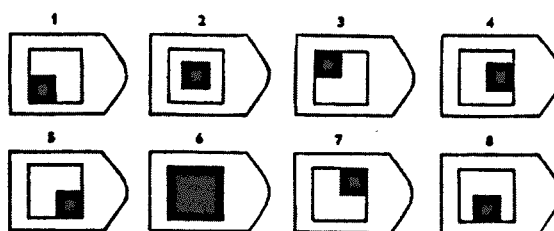
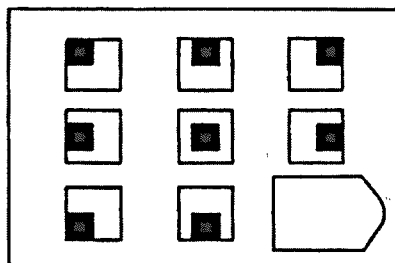


Spanish	English
1. Hugo: (...) Pues tú siempre dices, tonto.	1. Hugo: (...) Then you always say, idiot.
2. Javier: 2 (señalando).	2. Javier: 2 (pointing).
3. Hugo: 1 (señalando).	3. Hugo: 1 (pointing).
4. Ana: ¡No! (moviendo la cabeza).	4. Ana: No! (shaking head).
5. Hugo: No, no es cierto, no es la 1, ¡es la 2!	5. Hugo: No, it's not true, it's not 1, it's 2!
6. Javier: Que te dije, es la 2.	6. Javier: I told you, it's 2.
7. Hugo: Es la 7 (señalando), es la 3 (señalando).	7. Hugo: It's 7 (pointing), it's 3 (pointing).
8. Javier: La 3 (señalando).	8. Javier: It's 3 (pointing).
9. Hugo: Es la 5, pon 5, 5, pon.	9. Hugo: It's 5, put 5, 5, put.
10. Javier: ¡Ah, que no!	10. Javier: Oh, I told you not to!
11. Hugo: ¡Es la 5, tonto!	11. Hugo: It's 5, idiot!
12. Javier: (...) ¡Que no!	12. Javier: (...) I told you not to!
13. Hugo: ¡A que sí!	13. Hugo: I say yes!
14. Javier: ¿Cuánto a que no?	14. Javier: Do you want to bet that it's not?

15. (Ana escribe 5 en la hoja de respuestas)	15. (Ana writes number 5 in the answer sheet)
--	---

Transcript 3.2. C7 / Post-test

C7



Spanish	English
1. Hugo: Este (señalando) // Sí, porque mira. Aquí ya está, aquí ya está. Después aquí se completan ya estos. Aquí se completan ya estos. (señalando de izquierda a derecha las figuras de la matriz).	1. Hugo: This (pointing) // Yes, because look. Here it is already there, it's already there. Afterwards, here you complete them. Here you complete these others. (pointing to the figures in the matrix from left to right).
2. Ana: Yo digo que la 5 porque primero está aquí (señalando la columna derecha), luego ya está en medio, y luego ya está acá (señalando la columna izquierda).	2. Ana: I say it's the 5 because first it's here (pointing to the right column), after it's in the middle, and then it's over there (pointing to the left column).
3. Hugo: ¡Ah, sí es cierto! La 5. // La 5 sí está bien.	3. Hugo: Oh, it's true! It's number 5. // The 5 is right.
4. Javier: Sí, pongamos la 5.	4. Javier: Yes, let's put 5.

It is possible to see that in the pre-intervention test the children propose several options without stating any reason. Particularly, there is a dispute between Hugo and Javier, as they try to impose their point of view as the solution of the matrix, while Ana follows the dialogue in silence. The utterances of the children consist of assertions (*"I told you not to!"*) and counter-assertions (*"I say yes!"*) about the options, and challenges (*"Do you want to bet that it's not?"*) without explanations. All these elements help to classify the discourse of the matrix as disputational. All the findings show that it is probably not a coincidence that the option chosen as an answer for this matrix was wrong.

In the post-intervention test, it can be noticed that the participants suggest options while stating reasons for each of them. Hugo tries to explain the sequence that he has observed in the problem to his partners by talking about the presence of elements in the matrix (he points these out to them from left to right). He talks about *"completing"* a pattern. However, Ana seems to have taken a different perspective when she explains that they must observe that there is an element that is first on the left matrix, then in the middle, and finally on the right. Looking at the matrix, it is possible to see that in fact the little black square changes its position in each row from left to right. Ana identified this pattern. After her explanation, Javier and Hugo realise what she is talking about and agree in choosing option 5 as the answer, which is correct. The children's offering of reasons and arguments while exploring the options of the matrix, as well as the collaboration and the agreement finally achieved, helps to classify the discourse of the triad as exploratory.

3.2.7 Discussion of Pilot Study 1

From analysing the performance of the children in these two examples, it can be inferred that the children's use of an exploratory type of talk helped them to solve

problems that they were not able to solve when their discourse was disputational. It is also worthy of note that teaching the group to use exploratory talk did not have the effect of making them use this talk all the time, but only when it was useful to do so. Cumulative talk was appropriate enough as a mode of communication when dealing with easy problems, that is, those whose solution did not need the distributed cognition of the group. Exploratory talk was also not useful for the really hard problems that this group simply could not solve however hard they tried. However, exploratory talk helped the group to solve problems in sections C and D that they did not solve in the pre-intervention test. The results show no improvement in section E where the problems were simply too hard for this group and very little improvement in sections A and B where the problems were mostly too easy for this group to require exploratory talk. These results are summed up in Table 3.2:

	Degree of difficulty of the task		
	Easy	Medium	Hard
Degree of experience and comprehension of the task	High (The task can only be easy if you comprehend clearly what you are doing)	Variable (Some participants understand some aspects of the task while others don't, but together it is possible to solve it)	Low (Just some aspects of the task are understood by the participants and it is not possible to solve it together)
Socio-cognitive level	Skills already mastered	ZPD is created here	Skills not possible to acquire yet
Discourse	Cumulative	Exploratory	Any type

Table 3.2. Level of expertise, socio-cognitive level, and type of discourse of the participants in a task, according to the degree of difficulty of the task.

These results can be related to the concepts discussed earlier in this chapter, as follows. First, the observed differences in the types of talk used by the children in sets C and D of the RSPM provide strong evidence that the ways in which they were talking together

in the pre- and post-intervention tests created Intermental Development Zones of different quality. The superior strategies they used for combining their intellectual resources in the post-intervention tests helped them as a group to solve the problems they could not otherwise solve. To pursue this further, one could say that their increased use of exploratory talk expanded their joint Zone of Proximal Development, enabling them to achieve a better mutual understanding of the problems than they could otherwise have done. This is an important result because it represents a measurable 'ZPD effect' in the joint activity of a symmetrical group.

3.3 Pilot Study 2

Most of the research that has been done in writing of electronic documents has been carried out through the study of collaborative writing tasks. In this respect, it has been found that students tend to rely on each other for help and to share information not only with their partner but also with other pairs (Turner & Dipinto, 1992). This is congruent with the general findings of computer-mediated collaborative writing (e.g. Burns & Housego, 1996; Kleifgen, 1989) which has proven to be effective in encouraging purposeful social interaction in classrooms, the discussion and testing of alternatives between students (e.g. editing one another's errors), and the generation of both spoken and written language, with each mode of communication enriching the other.

As a task that involves the combination of several technical skills and perspectives about the content, electronic documents are more likely to be constructed in a collaborative way at schools and teachers prefer this modality when working with ICT. Studies that have been carried out following a sociocultural approach have found that the nature of discourse and social interaction in collaborative activities are key factors for the social construction of knowledge (e.g. Kumpulainen, 1994a, 1994b). Moreover, trying to categorise what would be the more important tasks that occur in collaborative

writing, several authors (e.g. Kumpulainen & Mutanen, 2000; Saunders, 1989) have suggested that collaborative writing can be conceptualised as being constituted by four main tasks or stages: planning, composing, reviewing, and correcting. When all these tasks are done in a collaborative way, several interaction and discourse processes can be observed. The next table summarises these processes:

Tasks	Patterns of Interaction
<i>Planning</i>	Brainstorming and evaluation of ideas
<i>Composing</i>	a) Division of responsibilities b) Simultaneous sharing of responsibilities c) Turns for writing fragments
<i>Reviewing</i>	Reading and assessing of the text
<i>Correcting</i>	Detection, diagnosis and modification of text

Table 3.3. Tasks and patterns of interaction in collaborative writing.

In the planning task, usually there is a wider presence of brainstorming for generating potential topics and ideas, and evaluating what the collaborators have generated. In the composing stage, the interaction can be characterised by any of these three patterns: a) division of responsibilities (e.g. generation of the text, making of decisions and transcribing), b) simultaneous sharing of responsibilities (e.g. offering and deciding between 'text candidates' and then transcribing) and c) taking turns on writing segments of the text. In the third stage of reviewing, co-writers continue their collaboration by reading and assessing the text together and trying to reach agreement about new options for a second draft. Finally, in the last task of correction, collaborators detect, diagnose and modify the text together.

All these interaction patterns have a different discourse related to them depending on the nature of the task. For example, it has been found (e.g. Saunders, 1989) that the length of the students' conversational turns in the planning stage varies depending on

the way they use each other's information to build shared concepts elaborating on some specific features while generating ideas and making choices about a topic or evaluating information. In the composition stage, students seem to focus their conversation in negotiating the text production and choosing the correct expressions for meanings. In the collaborative reviewing stage, the conversation usually involves discussing decisions made previously, and reaching agreements for a second draft. And finally, in the correcting stage, correctors would spend more time talking about alterations they might think useful.

However, this categorisation of discourse as proposed by Saunders (*ibid.*) does not go further in identifying the distinctive features that would help students more in the collaborative production of different electronic documents. In this respect, following a sociocultural approach, one possibility is to characterise the quality of interaction not only in terms of the type of writing task in which participants are involved, but also in terms of the dialogical orientations that they follow as characterised by the features of exploratory, disputational, and cumulative talk, which I discussed in section 3.2.4. Another possibility is to follow the sociocultural perspective presented in section 2.4.2 in relation to the study of literacy as a social practice, and to characterise the quality of 'literacy events' in terms of the different 'ways with words' that participants follow in these events in relation to the contextual links found by Heath (1983), which can be summarised as: a) participants do not discuss texts, or if discussed, there is not a tutorial role taken by any of the participants; b) participants discuss texts in a 'literal' sense, that is, further links with other texts and contexts are not explored, so texts are read as if they were unrelated to any situated interpretation; and c) participants discuss texts commenting further links with other texts and contexts, including imagined scenarios, so the interpretation of a text is established in a situated way, and consequently,

participants recognise that the same text in another context might be interpreted differently.

As I discussed in Chapter 2, to take a sociocultural perspective implies carrying out a study of the conditions of production of mediated action. That is, a sociocultural approach requires analysing social practices both as historically determined and interactionally accomplished. In this respect, the perspective taken by Heath in relation to literacy as a social practice seems to me to be ideal for the analysis of the quality of social interaction linked specifically to the use of texts. Nevertheless, given that the students I investigated participated in a series of lessons where they were taught the ground rules of exploratory talk in order to use these while constructing different electronic texts, in making the analysis I will comment on the links between the perspective taken by Heath and the 'exploratory talk' framework regarding the way students used language in different literacy events. Thus, in the following section, I will explain the methodology I used to investigate three different literacy practices: 1) constructing e-mails, 2) constructing concept maps, and 3) constructing WebSites.

3.3.1 Method

The study consisted in the observation of a small group of 3-4 Year 6 children in a primary school in Milton Keynes, UK, along 10 sessions working on the construction of five electronic documents:

- 2 e-mails, using Think.com (Oracle, 2001), a special web-based environment for posting documents and allowing computer mediated communication (CMC) amongst students from this and other schools. One of these e-mails was a social introduction of the members of this small group to another group of children in a different school. The other e-mail was about the topic of "the healthy human body", as part of a science lesson. These e-mails were written in the first 2 sessions.

- 2 concept maps, using eMindMaps (MindJET, 1999), a software especially designed for inserting and linking concepts and other graphic elements by means of branches, which generate a hierarchically organised structure. The first concept map was constructed as a result of following the tutorial for learning how to use eMindMaps, with the topic of “doing a shopping list”. The second concept map was about the topic of “healthy lifestyle”, also part of a science lesson. These concept maps were written in 3 sessions, after the composition of the e-mails described above.
- 1 WebSite, using SiteCentral (Cochard et al., 1999), a specially designed programme allowing students to create WebPages by dragging and dropping elements such as backgrounds, pictures, icons, sounds, hyperlinks, and text boxes. The WebSite consisted of 2 WebPages, and it was about the topic of “Queen Elizabeth I”. This WebSite was constructed in 5 sessions, following the construction of the concept maps.

The construction of these documents took place as part of an educational intervention programme in which pupils were taught the “ground rules” of exploratory talk through the implementation of a set of lessons aimed to link the use of these rules to several areas of the curriculum (Mercer & Wegerif, 2003). The ground rules that were taught and reminded to the children at the beginning of each of the lessons were:

- a) We share our ideas and listen to each other
- b) We talk one at a time
- c) We respect each other’s opinions
- d) We give reasons to explain our ideas
- e) If we disagree we try to ask ‘why?’
- f) We always try to agree at the end

I video- and audio-recorded the activities carried out by the children and elaborated ethnographic fieldnotes (following Emerson, Fretz, & Shaw, 1995) for each of the sessions. I watched the videos and listened to the audiotapes several times choosing and transcribing the most 'interesting' examples of how children used language according to:

1. The different ICT tools used: e.g., a web based environment for posting documents and sending e-mails and stickies, a concept map software, and a WebPage design programme.
2. The specific activities that took place along the sessions: e.g. writing paragraphs, following instructions, inserting branches in concept maps, planning and creating a homepage.
3. The way knowledge was constructed in the topics of "the healthy human body", "healthy lifestyle" and "Queen Elizabeth I".
4. The differences in the institutional role of participants: e.g., children working collaboratively on their own, as compared to collaborative activities carried out with the participation of their teacher.
5. Issues of power and definition of roles, gender, and identities between participants.

Following these 'dimensions of analysis', the use of language can be typified in a wide variety of ways, depending on the dimension chosen to frame a given typology. Initially, trying to follow this strategy, I ended up with a dozen of types of talk such as "tutoring talk", "brainstorming talk", "composing talk", etc. However, as I continued typifying more and more 'interesting' examples of use of language, I felt that this research strategy was leading me to an endless array of possibilities that was not helping me to grasp the sociocultural nature of the literacy events I intended to investigate. Hence, although this strategy seemed to be not very conclusive, it was useful in making

me more aware of the lively and messy nature of language in use, and consequently, on the need to link the types of talk I found to the sociocultural practices they were enacting in order to understand how participants were making sense of a given situation. Therefore, considering in more detail what entails to follow a sociocultural approach, I decided to shift the analysis by starting with the characterisation of talk as primarily constituting literacy events, which in turn enact different literacy practices. In addition, if talk and social practices construct each other in events where texts are being explored or constructed, the unit of analysis should be the event, as the site where mediated action can be analysed both as historically determined and interactionally accomplished.

3.3.2 Results

In the literacy events I investigated, I found that talk took its shape from the variety of goals achieved interactionally by the participants, from the affordances provided by each ICT tool used for the construction of electronic documents, and from the social uses acquired by these tools as part of a community in which different electronic documents were created. If, following the NLS, each of these social uses can be conceptualised as different ‘literacies’ linked to each ICT tool, I found that these literacies represent three distinctive social practices that were mediated by each ICT tool. Next, I will present the results corresponding to the practices of constructing e-mails and WebPages³.

3.3.2.1 The Literacy Practice of Constructing E-Mails

I found that the two sessions dedicated to the construction of e-mails were constituted by a characteristic set of literacy events. For instance, I found that the first event taking place as the children entered the classroom was what I called a “plenary task”, in which

³ For reasons of space, I could not include the discussion of the practice of constructing concept maps. However, I have presented a paper where I discussed more specifically this practice. (See Fernández, 2002)

the teacher started by explaining the goals of the session. In the case of the first session, the children were seating on the floor while the teacher reminded them that they were going to communicate with other small groups of children participating in the same project. In this respect, in this session they needed to introduce themselves by sending an e-mail to the other school. In the second session, the teacher started by making a recapitulation of the affordances of communicating with another group of children in a different school using the computer, and reminding them of the goal for the session: to write an e-mail about what they had been learning in science.

Another event that was consistent in the two sessions was what I called a “plenary ET”, in which the teacher reminded the children to use the ground rules of exploratory talk. For instance, as I wrote in my first ethnographic note:

[The teacher] reminds her students to use “good talk” strategies to carry out the activity. She tells the students that this ICT lesson is part of the talk lessons, and no matter if they are in the classroom or in the ICT lab, they still must consider that the strategies to talk effectively are the same for both places.

In addition, also in the first session, she elaborates on what implies to follow these rules:

The teacher explores with the children the issues involved around the use of rules, asking questions like “Who is using the mouse?”, “How would you use it?”, and making comments like “Remember to discuss with each other”, “Think about what you write and how you put it”, “Take turns to talk” and “Agree and approve with the members of your group what you are going to send to your partners in the other school”.

Similarly, in the second session, the teacher explained the children how to put in practice these rules:

Miss Davidson asks: “What do you need to do in order to communicate with others?” Children answer: “To listen.” M. Davidson adds: “Listening

to who? To Springdale school?" Children: "No". M. Davidson: "Listening to your talking group here. So, remember that when you write to Springdale you have to discuss and to agree between yourselves." By taking the yellow card of the ground rules, M. Davidson addresses to the children: "These will be in your computers just to remind you the rules that you must follow. However, you don't have to spend ages in discussing who's using the mouse or to explain the activity to each other, because the objectives for this lesson are going to be the following: a) To communicate via the computer, b) To give useful information about our science topic, c) To discuss and agree."

At this stage, it is worth noting how the teacher dedicated some time to help the children understand how the rules for "good talk" were going to be interpreted in the different activities they would be engaged, as when she mentions that they don't need "to spend ages in discussing who's using the mouse or to explain the activity to each other". That is, the teacher indicates the children how the talking rules are going to be interpreted given the objectives to be achieved in the lesson, which include the communication with other groups, the emphasis in the science content, as well as discussing and agreeing.

Other events that were consistent in the two sessions, were the events of "plenary brainstorming" (where the teacher asked the children for ideas to be included in the text), "composing text" (where the children elaborated different 'text candidates' to type in their e-mails), "scaffolding text" (where the teacher assisted the children in their writing task), and "plenary recap" (where the teacher assessed with the class whether the objectives of the lesson were achieved or not).

Next, I will analyse in more detail two of these events in order to show how talk contextualised the practice of constructing e-mails in each case. The first one is a "composing text" event, and the second is a "scaffolding text" event.

3.3.2.1.1 Two Literacy Events of the Practice of Constructing E-Mails

In the first session, once the teacher explained the goal to be pursued, she started a “plenary brainstorming” event. In this event, she explained how to proceed in relation to the composition of the e-mail by asking the students to suggest ideas while she was elaborating and writing them in the whiteboard. Given that the purpose of this e-mail was to introduce the members of small groups in Woodbury and Springdale to each other, the teacher wrote in the whiteboard several options that the children could use for writing the content of this message: e.g. to describe hobbies, age, description, personality; to ask questions about likes, dislikes, school uniform, family, etc.

As a result, in the following “composing text” event, children were seating around the computers signing into Think.com, and ready to type their e-mail. In the case of the small group of students that I was observing in Woodbury, they had decided to take turns to write, so in this occasion David was the one introducing himself to the other group of students in Springdale, while Sue and Eva were helping him to carry out this task. Thus, David started to write: *“Hi, I am David”* and then in the following turn, *“I am pleased to talk to you through the computer. I have light blue eyes and light blonde hair. My hobbies are magic tricks, teasing my sister and I like Maths. I am 9 years old and my birthday is on the 10th of July 1991. Do you have school uniform? I have a sister called Amanda. Do you have a sister?”* In this respect, the following is a transcript of the event where they negotiated the last part of this e-mail:

Transcript 3.3. Questions.

1. Sue: Scroll down. Oh, hold on.
2. Eva: What else do you want to say?
3. David: Tell them my sister's name?
4. Sue: [No...
5. Eva: [My sister's name is...

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6. Sue: Oh, you can ask questions. You can ask questions.
7. Eva: No.
8. Sue: You can ask questions. You could say: What do you look like?
9. Eva: (...)
10. Sue: My sister's name is bla, my mom's name is bla,
11. Eva: [Oh, your mom's name is not bla
12. Sue: [(...) does name bla. Whatever the name is...
13. Eva: (...)
14. Sue: Or you could just ask questions.
15. Eva: Christians?
16. Sue: Questions! Silly.
17. Eva: You've said Christians
18. Sue: I haven't. Do you have....?
19. Eva: Do you have a sister? Do you have a sister?
20. Sue: Do you have a sister?
21. Eva: sis... school uniform?
22. Sue: school
23. Eva: U, N, I F, O, R, M [F, O, R, M (spelling, while typing)
24. Sue: N, I, [F, O, R, M (spelling, while typing)
25. David: Question mark
26. Sue: Wait, wait. Where's the question mark?
27. David: Here we go.

At the beginning of the event, we can see how children started triggering ideas from each other with the question "What else do you want to say?" (turn 2), which implies that something else has already been written and they have arrived to a moment where they need more information to type in. After this triggering question, in turns 10-14 there is a discussion between the possibility of writing the names of some members of

David's family and the possibility of "just asking questions" (turn 14). Thus, suggestions of the type of questions they could write down are coming after the other with little explicit discussion for choosing one of them. The process is carried out more in a 'cumulative' way, modifying in each utterance the ideas put forward for consideration by each of the members of the group. Changes to the questions proposed range from "what do you look like?" (turn 8) to "do you have a sister?" (turn 19), and the incomplete elaboration referring to "....school uniform" (turn 21). An implicit agreement is assumed for choosing this last option, which has become the new text candidate to be written into the e-mail and that is spelled by the children in turns 23-24 while they type it.

However, it is also worth noting that despite the 'cumulative' style, children were quite productive, as if the elaboration of text candidates throughout the conversation were a creative game, including jokes (e.g. turns 15-16), which helped them to produce and refine the text included in the e-mail. In this respect, it seems to me that children chose to use language in the way that was more efficient to get their e-mail written pursuing the goal as it was set out by the teacher in the plenary task at the beginning of the session.

Notwithstanding, I also would argue that the way they treated this piece of text was quite literal, as they are "just asking questions" (turn 14) that do not seem to be considering more deeply how this text is going to be read by the other group of children in Springdale. For instance, many of these questions are so stereotyped, that children already know the answer to some of them, such as "do you have school uniform?", which is a fact already known by them as this is a regular practice related to the use of clothing in schools in the UK. Thus, I would suggest that this is an example of literal contextualisation, following Heath's categorisation of literacy events, given that they

don't seem to be considering the wider context of a real audience, and consequently they are not generating questions that are more authentic. In the next transcript, the teacher seemed to have noticed this type of approach to the text:

Transcript 3.4. Do you have a sister?

1. Teacher: Right. Have you checked it?
2. Sue: Yeah.
3. Teacher: Right. Let's see. "I have a sister called Amanda" (reading) // "Do you have a sister". // Who are you asking whether they got a sister or not? Everybody in the hall? Cause everybody is going to see this (at Springdale).
4. Sue: So, you can't do that.
5. Teacher: So, have a think. Have a discussion together briefly. Who you asking if they have got a sister?
6. Sue: We don't know who will be reading it. Just asking the whole class, and then we can...
7. Teacher: "I have a sister called Amanda". "Amanda" (reading).
8. Sue: "Do you have a sister?" (reading).
9. Teacher: Do you have...? What about...? How could you word that slightly differently? Cause you are not speaking to one person, are you?
10. Sue: Does the class have a sister?
11. Teacher: Does anyone...?
12. Eva: [in the class have a sister?
13. S; [Does anyone have a sister?
14. Teacher: What do you think? Discuss that now. I gave you an idea, but you've got to agree, haven't you?
15. Sue: Does anyone? Does anyone in your class have a sister?
16. Teacher: Which they are going to have, really ...somebody. What about...? I mean, you get on very well with your sister, don't you?
17. David: (nodding) (...)

18. Teacher: Well, what about doing, writing a little bit about that? Is nice that you are writing about your sister. "Do you have a sister" is not going to be a very useful question, is it? What do you think (to Eva)?
19. Eva: Ummf (shaking head negatively)
20. Teacher: What do you think Sue?
21. Sue: We could do... do you have a sister who is...
22. Eva: going to your school
23. Teacher: That's right.
24. Sue: [Do you have any family at school?
25. Teacher: [Right. Discuss it; discuss it again for a minute.

We can see that this event started with the teacher checking what the children have done so far. The teacher reads aloud the last sentences with the question of "do you have a sister?" (turn 3) and she asks who will be the audience reading this. In response, Sue assumes that if a whole classroom in Springdale will read this, then "you can't do that" (turn 4). However, after a request of the teacher for making a discussion of this (turn 5), Sue insists that as they "don't know who will read this" (turn 6), they are just asking the whole class. In turn 7, the teacher then asks the children again to word the question slightly different as they are not "speaking to one person", leaving implicit the fact that a question like "do you have a sister?" will be answered differently depending on the person reading it. After this, Sue and Eva propose several text candidates like "does the class have a sister?" (turn 10) and "does anyone have a sister?". In turn 14, the teacher asks the children to discuss the possibilities and to agree, a clear invocation of the ground rules for "good talk" they were asked to follow in the "plenary ET". In addition, in turn 16 the teacher implies that an answer to this question it is not that difficult to obtain, as it is going to be very easy to find somebody with a sister. In turn 18, she then motivates the children to pursue other possibilities by asking David that if he gets on well with his sister he could write more about that, as the question of "do you have a

sister?" in any different wording will not be a "very useful question". After this, the children start to think in other possibilities for questions like "do you have a sister who is going to your school?" (turns 22-23) and "do you have any family at your school?" (turn 24). Teacher leaves in turn 25 by asking the children, as she has been doing during her intervention in this event, to have a discussion and to decide together, as another clear invocation of the exploratory talk ground rules.

In general, in this segment we can see that the teacher makes a big contribution to the event by challenging children's ideas about the kind of information they want to get from the other small group of children at Springdale, and the way they are wording their ideas. She gives gradual assistance by maintaining the activity of the children as they strive to write this piece of text, motivating them and directing their actions, such as suggesting to David that he could write more about how he gets on with his sister; and also by highlighting critical features of the task, such as the way they are wording the question for getting information. She provides that vicarious consciousness that Bruner (1978) defined as part of 'scaffolding' in order to help the children to accomplish the task by recontextualising the text with comments about the variety of possibilities in which these e-mail can be read, and the need to generate "useful questions". This resembles the literacy events that Heath found in the Maintown community she investigated, where comments were made about the text out of its immediate actual context. In this case, Miss Davidson helps the students to shift their focus from the immediate context in Woodbury and imagining the way it will be read in the context of the other small group in Springdale. Thus, I would argue that the way the teacher uses the word "useful" in this event recalls the criteria of appropriateness referred by Street (e.g. 1997) in relation to using language in ways that are meaningful for a given community. In this case, this usefulness comes from the ability required to produce authentic questions as well as to provide other relevant information for a real audience.

By participating in this event, these children are being socialised into a specific communicative practice afforded by the ICT features of e-mails.

Compared to the transcript 3.3 in which the children explored several possibilities for constructing this e-mail being too literal in their interpretation of the situation, the intervention of the teacher in the latter “scaffolding event” was crucial to shift the frame of reference of the task towards a more appropriate version of what was required at this stage in the communication between the two schools. As a result, I would suggest that the communicative style required in literacy events is defined by the social goal aimed to be achieved in each event, so that the features of talk must be evaluated in this respect. In other words, I would say that the IDZ constructed by students on their own in transcript 3.3 do not reach the quality of the IDZ constructed by the teacher and the students, given that the students did not have the specific skills about how to make a critical reading of their writing that the teacher provided. Next, I will explore the literacy practice of constructing WebSites.

3.3.2.2 The Literacy Practice of Constructing WebSites

3.3.2.2.1 *Two Literacy Events of the Practice of Constructing WebSites*

As well as in the case of the literacy practice of constructing e-mails, the literacy practice of constructing WebPages was constituted by a set of specific literacy events. These literacy events took place during the last five sessions of the project, from sessions 6 to 10. In these sessions, Miss Davidson, the first teacher who was working with the class that I was observing, had left her leading role in the literacy hour and had been supplanted by another teacher: Mr. Smith. Managing the activities of the class in the ICT room, Mr. Smith would start the lessons by placing a strong emphasis on the ICT affordances of WebPages and in some aspects of visual design that I will describe further in relation to the way in which he carried out “plenary design” literacy events.

For instance, in session 6, the first session dedicated to the planning and construction of WebPages, Mr. Smith started with a “plenary design” event where he asked the children to observe other WebPages over the Internet in order to see how they could put elements together to design their own WebPages. He mentioned: “Looking at other experiences you will be able, hopefully, to write your own WebPage. Talk to each other to decide how best your WebPage can be designed.... look how the elements are put together. Look at the background, look at the pictures, how you find the information, how is related, etc.”

Later in this session, using a data projector, Mr. Smith showed how the Wimbledon WebPage could be used to find information about the games, the players, the matches, scores, etc. He placed emphasis on how to find information about the several options of the menu. Then he reiterated: “Have a look to the Internet, write down the addresses. To decide if the pages are boring or interesting, think about the following: Do they have images? Sounds? Text? How does the WebSite work and how is it going to help you to put your own links?”

As the class go back to work in small groups, I also return to the place of the small group of children that I was observing in order to restart the camera that is recording them, and then I leave. Next, I present a transcript of the literacy event of “exploring WebSites”, which took place after Mr. Smith’s instructions. The children are exploring the Internet looking for resources about the Tudors and the Queen Elizabeth I, as this is the topic they have chosen for their own WebSite.

Transcript 3.5. Tudors.co.uk

1. Sue: What WebSites, what WebSites shall we try? Have you got any suggestions?
2. Eva: Double u, double u, dot. Double u dot. (typing <http://www.tudors.co.uk>)
3. Sue: You tried it?

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4. Eva: Yeah.
5. Sue: And then if we see like a box, like little... // OK. We need to go back
6. Eva: (giggling) Go back.
7. Sue: That's a shop.
8. Walter: What can you buy?
9. Sue: Keep going to see what's down.
10. Eva: (reading) "Welcome to Tudors" (...)
11. Manuel: Was the Queen Elizabeth a Tudor, a Tudor?
12. Sue: Yeah. Tudor. Queen Tudor. Tudor.
13. Eva: I think this is like.
14. Walter: This is the Tudor's houses. A Tudor houses! (referring to the actual page which is a real estate agency called Tudors)
15. Sue: Where do you think we should go on? We should try double u, double u, dot, Queen Elizabeth the first.
16. Eva: Go on then (typing). Dot. Queen Elizabeth.
17. Sue: E, L, I, Z, A, B. No there, not (pointing to the URL addresses space in Internet Explorer). Elizabeth the first, because there might be Elizabeth the second.
18. Walter: One. One (while typing "elizabeth1st").
19. Sue: One, S, T.
20. Walter: One, S, T.
21. Sue: Try that
22. Eva: First.
23. Sue: Dot co.
24. Walter: Dot uk.
25. Sue: Do dot com // OK. (finishing to type in the address: <http://www.elizabeth1st.com>)
26. Eva: "Could not be retrieved" (reading) // double u, double u, dot (typing)
27. Sue: This is not going to // Erm. Elizabeth the first.

28. Walter: That's all. No matter what.
29. Sue: Ha? // Elizabeth.
30. Walter: The second.
31. Sue: No, the first.
32. Eva: Yeah. // First // dot co, dot.
33. Sue: uk. (finishing to type in the address: <http://www.elizabeth1st.co.uk>)
34. Eva: Going back. Come on. Press back. Go back. Back. Go right to the...
(pointing the screen)
35. Sue: No. Back, back, back (pointing the screen) // Let's see.
36. Eva: Why is it? // Right
37. Sue: Go forward. Go forward.

We can see how the children are trying to do a search over the Internet, and they start by guessing some addresses probably based on what they have learned in the past about the way URL's are constructed for WebPages. In other words, they might have learned that according to the 'grammar of the Internet', an URL always starts with <http://>, followed by www., then the name of the topic or title you are interested to find, and finally, either the termination [.com](http://www.tudors.co.uk), or [.co.uk](http://www.tudors.co.uk) . Following this rule, they first try the address <http://www.tudors.co.uk> , as the Queen Elizabeth I was part of this royal family in Britain. However, to their surprise, this URL is the address for the WebPage of a real estate agency, nothing to do with the Queen Elizabeth I or the Tudors as a royal family (turns 2-14). Following the same rule as well, they try the URL's <http://www.elizabeth1st.com> (turns 15-25), and <http://www.elizabeth1st.co.uk> (turns 26-37) with unsuccessful results. In the last two attempts, the pages do not even exist and the message of "the page could not be retrieved" triggers in them a sequence of clicks in the buttons back and forward in order to try to make the WebPages work.

The way they are acting in front of the computer reflects a lack of searching skills in the Internet that does not give them any information for the purpose of building their own WebSite. Although the way they are using language is helping them on exploring one way of searching over the Internet, as they all give suggestions about how to proceed, they do not manage to solve the problem of not finding information about the Queen Elizabeth I. Hence, it is possible to hypothesise that unless an adult or more experienced peer comes to explain them the procedure on how to use a search engine, they will not be able to find by themselves such information. It seems that they can use language in a functional way to agree on what they are trying to do, and yet, there will be features that surpass their level of understanding of the task that can not be overcome if they are not assisted by a tutor providing the 'scaffolding' they need to search information successfully.

In this respect, once more I would argue that this is a literacy event that has a literal reading of the situation, in the sense that the children think that by typing the addresses with the names of the topics that they are looking for they will get the necessary information. In order to be successful in their search, I would suggest that they need to change the context in which they are interpreting this situation by being socialised in the appropriate use of the tools required to carry out this task effectively. That is, in the event discussed in transcript 3.3, I argued that children were required to learn to construct "useful questions" as a result of being socialised in the practice of writing an e-mail for a real audience. Similarly, what the children require in this case is to be socialised in the practice of searching information over the Internet, which includes not only to know the grammar of URL's, or to be able to talk to each other and agree on a given URL to be tried, but also to learn how to use other tools such as a search engine to get what they are looking for. As I mentioned in section 3.3.1, talk and practice construct each other, and thus, what is needed here is a conversation providing the

guidance on how to carry out effectively these types of events, helping them to recontextualise the way this search was originally being carried out.

In addition, I would argue that this example illustrates how the practice of constructing WebPages is closely associated to the practice of looking for information over the Internet, not only in relation to finding useful links, but also in recognizing the distinctive features that compose a WebPage as a genre. In this respect, Mr. Smith was interested in this session in having the children identifying such features in order to be able to construct their own WebPages. Although I agree with his strategy, as I have shown, prior to the engagement of the children in this identification process they also needed the skills related to the practice of searching for information, which were not explained by the teacher before the event.

As the sessions passed, children started to learn how to use SiteCentral, and progressively they got engaged in a more complex set of goals that needed to be carried out. For instance, in session 8, in my ethnographic notes, I wrote down:

“Mr. Smith introduced the objectives of the lesson:

- 1) To plan the actual physical page, deciding what would be the main highlights and points to take into consideration.
- 2) Insert any image you have from
 - a) Clipart
 - b) Photos from SiteCentral
 - c) Internet
- 3) Your text
- 4) Links and hyperlinks

- 5) Elements that you need to take into account to create the page:
 - a) Background
 - b) Sounds
 - c) Buttons”

In this session, children tried to achieve all the goals set out by the teacher. For instance, most of the children elaborated a plan to use in subsequent sessions, including links to other WebPages, defining the layout of several graphic elements and the background colour, etc. Nevertheless, the incorporation of so many elements in a WebPage during the remaining time of this session led to the production of WebPages such as the following, which is full of elements without a meaningful connection in a ‘flashy’ style, with plenty of animated pictures and sounds.



Figure 3.5. Example of one of the first WebPages produced by children in Woodbury school.

In sessions 9 and 10 children started to work on the actual construction of their WebPages. For instance, in session 10 the small group I was observing continued

working on their homepage about the Queen Elizabeth I as soon as they arrived to the ICT room. As they started to insert elements into their WebPage, suddenly they realised that previously they had prepared a planning sheet to be used in this session, with a list of URL's about the Queen Elizabeth I. Next, I present a transcript of the event where the group of children are being addressed by the teacher when they are attempting to put on the screen the elements they planned on paper on session 8. At this moment, they had started to write the title of the page, and now they were writing the names of the members of the group at the end of the page. It is in this moment when the teacher arrives to ask them to refocus their attention from this task.



Transcript 3.6. Planning Sheets

1. Teacher: Right. Can you do that later? [Can you put your names later? Do you mind if you... How are you getting on with your WebPage?
2. Sue: [Yes, we're just...
3. Eva: (reading) "Click in for more info"
4. Sue: Can we get our planning sheets?
5. Teacher: Pardon?

6. Sue: Can we get our planning sheets? Cause we need to look for information.
7. Teacher: No, you just need to get on to create the next WebPage. You can always come back and do more on it, right?
8. Sue: But we need the web addresses that we wrote down last session to do the WebSite now.
9. Teacher: Right. You need the background. This. This is gonna be what?
10. Sue: Page.
11. Teacher: This page is gonna be about what? Elizabeth...
12. Sue: Page about Elizabeth I different WebSites. Different WebSites. That's why we need our WebSites.
13. Teacher: OK then. You need a background then.
14. Eva: We all do the background. We all choose the background.
15. Teacher: And if you go into 'Cool Stuff'. Go into 'Cool Stuff' (pointing to a tab in the screen in SiteCentral).
16. Sue: Yeah.
17. Teacher: There (pointing to some tabs on the screen). The 'E-mail', 'Html', you can cut that as a background, can't you?
18. Eva: Cool, go on then.
19. Teacher: Links. Look there's one that goes 'Links' (pointing to a tab on the screen). Yeah? Have a look.
20. Eva: I like that (pointing).
21. David: Cool.
22. Teacher: These are all files (pointing to the screen).
23. Walter: They are files (pointing).
24. Teacher: These are files here, look (pointing to tabs on the screen). There will be much more than that.

In the previous event, we can see that the children were looking for the planning sheets that they elaborated the previous session. They need them for typing the URL addresses they had decided to include in this WebSite about where to find information of Queen

Elizabeth I (turns 4-8). However, despite their intention, the teacher encourages them to refocus the attention to dragging and dropping other elements from the 'Cool Stuff' menu, like a background and icons of 'E-mail', 'Html', etc. For instance, in turn 8, it is possible to see how Sue insists in getting back their planning sheets just to have her request dismissed by the teacher in turn 9, where he instead started to question the set up of their WebPage (e.g. "Right. You need the background. This. This is gonna be what?").

If one of the main roles of a tutor is to 'maintain the activity of the children as they strive to achieve a specific goal, motivating and directing their actions' (Wood et al., 1976), I would suggest that in this case the role of the teacher is the opposite by trying to refocus the attention of the children to a version of the task defined by him. Although refocusing itself is not a 'threat' for the scaffolding process, in this case, such refocusing directs the attention of the children to a version of the task that lacks of coherence in relation to the work that the children are pursuing. It is as if the Intermental Developmental Zone they are constructing is being interpreted in two different ways. On the one hand, for the children it is more meaningful to include the URLs of the sites they think should be visited by potential readers for obtaining information about Elizabeth I, rather than actually putting backgrounds, icons, and pictures that in this moment do not have a connection with the information they are trying to communicate. On the other hand, the teacher is pursuing his own goal according to his conception of what should be included in a WebPage in terms of graphic elements, and is giving priority to this idea over the children's intentions and plans. By doing this, the children abandon the elaboration of content in the way they had planned, dedicating their efforts to drag and drop backgrounds and other audiovisual components as required by the teacher. Analysing the actual WebPage

produced by this group of children (shown at the beginning of transcript 3.6), I found that there is very little text in the page, lacking of content about Elizabeth I.

Later in this session, Mr. Smith asked the children to analyse if the images they had put in their pages were relevant, “eye-catching”, and if the text was big enough. The teacher’s emphasis on the visual design can be linked to his earlier comments about the need to have WebSites that are “interesting” and not “boring” as I previously quoted some of his comments from session 6, but also, to other instances in which he privileged the discussion of visual design as a combination of ‘exciting’ features rather than emphasising how the construction of WebPages is also a communicative process embedded in a social practice where some conventions are being developed. As I wrote in my ethnographic note of the 7th session:

Mr. Smith asks them to look at the options and tools available for constructing the WebPage [in SiteCentral]. However, he doesn’t ask the children to explore the software with any specific objective (i.e. thinking in the options children will use for the construction of their WebPage). It is a non-guided exploration, looking for “flashy” elements, special effects, but no meaningful construction of content into the WebPage. The challenge is how to include in the children’s discourse the grammar of this new communication media, how to make the children take the best of the features of this semiotic device to express something meaningful.

This is the same challenge expressed by authors such as Lemke (1998), Street (1999b) and Kress (1996) in the sense that the design of multimedia documents (as well as of other more linear and traditional printed documents) is not a simple matter of combining elements, but of doing it recognising that this combination is intended to communicate a message in a specific way. Thus, for these authors, designing is interpreted as a process of constructing statements, which implies the intention of the designer to say something to a certain audience; designing is about recognising that texts are read both in relation

to the interpretation made by participants in a given situation, and determined by the conventions of a given community. In this respect, what the teacher and pupils need to recognise is that multimodal documents, such as their WebPage, serve a social purpose and in this way the challenge is to identify the appropriateness of the possible designs that they are constructing as part of an electronic communicative practice that is situated in a given community. Consequently, the role of the teacher is to identify with the students the social uses of the WebPage they are constructing and to support them in the achievement of effective design of meanings.

3.3.3 Discussion of Pilot Study 2

In this study, I used Heath's (1983) findings of the different 'ways with words' in three different communities as a framework for the analysis of ICT mediated collaborative literacy events. In addition, I drew on the 'exploratory talk' framework, and on the concept of IDZ in order to evaluate the quality of talk in four literacy events, as part of the practices of constructing e-mails and constructing WebPages.

Thus, in the first literacy event that I analysed, I showed how pupils had a 'literal' contextualisation of the way they were constructing an e-mail, and in particular, in relation to the way they were constructing questions for another group of children. In contrast, in the second literacy event, I showed how the teacher helped them to recontextualise the way they were interpreting the construction of this e-mail, by discussing ways of writing questions that were more authentic, as well as exploring alternatives for providing relevant personal information. I argued that the quality of the IDZ constructed in the second event was better than in the first one because the talk of participants contextualised the writing of the e-mail in terms of 'constructing a message for a real audience using the writing conventions valued in a community', as the NLS framework helped me to illustrate.

In the third literacy event, I showed how although children agreed on several URLs to be typed in Internet Explorer, they did not manage to be successful in finding the information they were looking about the Queen Elizabeth I. Thus, I suggested that children needed to be socialised in the use of other cultural tools such as search engines, and that in this respect, they needed to participate in conversations in which an adult or more capable peer would explain them how to tackle this situation more efficiently. Lastly, in the fourth literacy event, I analysed how the teacher was very enthusiastic in the use of a variety of audiovisual components of WebPages, without emphasising their social use. He directed the attention of students to a version of the task that was not meaningful to them, despite his initial evaluation that they might have been losing time by typing text rather than incorporating more elements to the design of their WebPage. Thus, I argued that children needed to be socialised in events where the process of design is characterised as a process of construction of audio visual statements that are directed to a specific audience and subject to certain conventions valued in a given community.

Finally, I would suggest that in the third and fourth events presented here, the quality of the IDZ was quite 'low', given that students were contextualising the situations in a rather narrow sense. Consequently, what is required to improve the quality of these IDZ's is a more elaborated interpretation of the situations by participants, so that the literacy practices of searching for information and constructing WebPages can be transformed into a more efficient and meaningful process for them and their audience.

3.4. Conclusion

In these pilot studies I have investigated the way language has been used by participants to construct knowledge in social interaction. In addition, I have been looking at how the variation of language use in different events can be evaluated in terms of the quality of

the shared understanding between participants. In this respect, in the first study I found that the use of language, as characterised by the exploratory talk framework, varied depending on the degree of difficulty of the problem which students talked about in the RSPM test. In other words, I found that ET was not used in all the matrices that children attempted to solve, but only when it was useful to do so. That is, in the easiest matrices, children used language in a more cumulative style; in the matrices with a medium degree of difficulty, students used more exploratory talk; and in the most difficult matrices, children used a combination of cumulative and disputational talk. Moreover, analysing the way language was used by children in two isomorphic matrices in the pre- and post-test, it was found that the quality of the IDZ's constructed in interaction was quite different. The use of an exploratory style in the post-test implied a more accurate interpretation of the way different elements of the matrix were connected to each other logically, so that the children were able to choose the right answer for this problem.

In the study 2, the analysis of different literacy events also revealed different degrees in the quality of use of language in social interaction. In this respect, I argued that the quality of IDZs was related to the way participants contextualised the situation in each event. Following the NLS, and in particular Heath (1983), I suggested that dialogues could be characterised as part of a situation where more literal or more elaborated interpretations were made of the use of ICT resources for constructing different electronic documents.

Following these findings, I would argue that the use of language cannot be considered to be detached from the conditions of production in which dialogues take place, a claim also shared by authors such as Voloshinov (1986), as I discussed in section 2.3.3.5.1. In this sense, I would suggest that language variation cannot be considered to be only a direct function of the dialogic orientations of participants, given that language use is

also related to the way participants interpret a given situation, so that the way they talk about it also reflects this interpretation. In consequence, this also implies that the assessment of the quality of any event needs to acknowledge the existence of at least these two conditions of production. In this respect, I found the concept of IDZ useful to analyse the relationship between the dialogical orientation and the interpretation of the situation made by participants. Consequently, it is interesting to return now to the definition of the characteristics of the IDZ given by Mercer (2000) and referred to it earlier in section 3.2.3 in this chapter:

- a) Any joint, goal-directed task must involve the creation and maintenance of a dynamic, contextual basis of shared knowledge and understanding*

In the analyses I have carried out in the pilot studies presented here, I have shown how the construction of this dynamic contextual framework has been indeed directed to a goal, and in this respect, language use is situated in events where participants strive to achieve specific goals. Hence, the shared understanding includes a dynamic interpretation of what is required at each stage that is reflected in the way dialogue takes place.

- b) Language use during joint activity both generates and depends on the creation of this contextual framework*

As I also discussed in the studies presented here, language use and activity are part of a process in which they generate each other according to the nature of the context of the situation. In pilot study 1, language and activity were situated in the context of a psychological test, so that language was used according to the degree of difficulty of each of the matrices they tried to solve. In pilot study 2, language and activity were situated as part of literacy events, and in this respect, language use was associated to the literacy practices of constructing e-mails and WebPages.

- c) *The success of any collaborative endeavour will be related to the appropriateness of the communication strategies participants use to combine their intellectual resources.*

In both studies, the concept of appropriateness of use of language was crucial. In the first study, the appropriateness of use of language was related to the children's perceived shared level of understanding and the degree of difficulty of the task. In the second study, this appropriateness was established in relation to the comments of participants in which the composition of e-mails, the search of information over the internet, and the construction of WebPages was understood as a social practice concerned with the design of statements for a specific audience acknowledging the existence of conventions valued in a given community.

In the next chapter, I will expand the theoretical and methodological concepts presented in Chapters 2 and 3 in order to study the dynamics of context in more detail. Thus, on the one hand I will be looking at issues such as indexicality, cultural patterns, communicative division of labour, and collaboration in social interaction. On the other hand, I will provide an account of how participants simultaneously characterise the practice of constructing WebPages according to the construction of categories in three different frames: a) design, b) historical knowledge, and c) group work.

CHAPTER 4. SOCIOLINGUISTICS AND DISCOURSE ANALYSIS

In Chapter 2, following a sociocultural perspective, I described the importance given to the use of language as a tool for constructing meaning in social interaction. In addition, in Chapter 3 I argued that the concept of IDZ could be a useful resource for analysing the discursive strategies followed by participants for constructing shared understandings. However, from the experience gathered in the pilot studies, I also noticed that I needed some extra methodological tools in order to study language in use, according to the conditions of production of situated actions. In this respect, in this chapter, I will discuss the main approaches currently existing in sociolinguistics and discourse analysis, as a personal selection that nonetheless is intended to be as comprehensive as necessary for the purpose of the analysis carried out in the main study in this thesis. The five approaches I will explore here are: 1) Ethnomethodology; 2) Social Semiotics; 3) Ethnography of Communication; 4) Critical Discourse Analysis; and 5) Interactional Sociolinguistics. Second, drawing on this revision, I will define which methodological tools I will use for the analysis of the data collected in the main study

4.1 Approaches in Sociolinguistics and Discourse Analysis

4.1.1 *Ethnomethodology*

Ethnomethodologists are interested in the study of the rules and methods of the participants in a situation and the way in which they act, in practice, in a rational way. Garfinkel (1967), one of the founders of ethnomethodology, abandoned the idea that human behaviour could be explained entirely by the way people are guided by a set of universal social rules, however complex and implicit they might be. In contrast, ethnomethodologists are concerned with the study of how social rules are constructed

moment by moment, and how participants react and accommodate to the different social situations in which they are involved. In other words, the focus is on the methods by which people make inferences about the world and themselves in it.

Garfinkel built his approach based on the research line of social phenomenology developed by Alfred Schutz (1962). Schutz proposed that the following features would be the fundamental aspects of everyday consciousness:

1. **Reciprocity of perspectives:** Individuals make a variety of assumptions in relation to the world, and they assume that anybody else who is in the same situation is making the same assumptions.
2. **Objectivity of appearances:** Individuals assume that situations are made of objective facts that are not subject to any doubt.
3. **Typifications:** Facts occurring in one situation are taken as instances of the type of facts that have happened before and that will take place again in the future.
4. **Practicality and goal-directedness:** Individuals experience a situation as something they are doing, as part of a project they are working forward in their lives.
5. **Stock of commonsense knowledge:** Individuals interpret situations by using a stock of symbols such as the words in their language, and other resources stored in the form of cultural knowledge. This knowledge is socially based and is assumed to be obvious to everyone.

Following these principles, Garfinkel started to develop his own theoretical framework, and as a result, he added two other principles to the ones proposed by Schutz:

6. **Indexicality:** Context must be taken into account in order to make sense of any particular experience. Any particular item of significance is an “index” of what lies beyond it. If an individual tries to explain explicitly the assumed background, this

leads to a still further context that is being taken for granted, and so on. To avoid this infinite regress individuals use the procedure of commonsense reasoning.

7. **Reflexivity:** Individuals live in a world of particular situations, though they use general concepts to interpret them. Nevertheless, these concepts are never directly seen and are only illustrated by alleged examples of them. There is no escape from this circular relationship.

As a result, given the importance of context and the situated nature of meaning making, ethnomethodologists have been fundamentally interested in the study of the role that language plays in the everyday achievement of institutional actions.

Influenced by ethnomethodology, two important approaches in discourse analysis have been developed: Conversation Analysis and Discursive Psychology.

4.1.2 Conversation Analysis (CA)

Conversation Analysts (CA) are interested in the study of the way participants construct social order through conversations. The origin of this approach is in Sociology, with researchers showing an interest in the construction of society in interaction. This is considered to be a micro level of analysis that is opposed to a view of the constitution of society based on the establishment and consolidation of institutions, which represents a macro level of analysis. In other words, Conversation Analysts can be seen as sociologists who assume that everyday social structure is a skilled accomplishment by competent actors.

With this focus, Conversation Analysts use conversations recorded in tapes as their only source of data that they transcribe and analyse in a very detailed way as samples of the construction of society in interaction. They don't trust in any other additional source of information such as interviews, ethnographic notes, or questionnaires that are considered always secondary data of no value for the purposes of their claims.

The analysis is based on the different turns taken by participants where context and discourse construct each other in an undifferentiated way, and where the only valid categories for analytical purposes are the ones that are made explicit in the discourse by the participants. However, the main interest is not really the categories that are being thematised by conversants, but the process by which these categories are being constructed through a mechanism comprised mainly by:

- I. **Turn taking:** Sacks, Schegloff and Jefferson (1974) noticed that turn taking proceeded in an orderly way and documented several observable facts. First, speaker-change takes place. Second, overwhelmingly one participant talks at a time. Third, despite this quite significant tendency, occurrences of more than one speaker at a time are common, although brief. Fourth, transitions from one turn to the next with no (or only slight) gap and overlap are frequent. Fifth, there are turn-allocation techniques; the person currently speaking can select the next person (for instance, by asking a question to a particular individual), or the next speaker might be self selected. Additionally, usually there are no prearrangements for a naturally occurring conversation: neither the order, nor the length of individual speakers' turns is specified beforehand; similarly, the length of the conversation, the topics that will be discussed, the number of participants, and the relative distribution of turns are not preset. (See also Fasold, 1990 p. 66-71).
- II. **Sequential positioning:** Turns at talk are overwhelmingly produced as a response to the preceding talk and as an anticipation of the kind of talk which is to follow. By formulating their present turn, speakers show an understanding of a prior action and reveal their expectations about the next turn to come, at a multiplicity of levels. For instance, by accepting a turn, a participant can show an understanding that the previous turn was possibly complete, that it was addressed to him/her (or them), that

it was an action of a particular type (e.g. an invitation), and so on (Heritage, 2001; Schegloff, 1984).

- III. **Adjacency pairs:** Turns in a conversation minimally come in pairs. In this respect, the first turn generates specific expectations that restrict the possibilities of allocation for the second turn. For instance, adjacency pairs can occur in turns performing question / answer, complaint / apology, greeting / greeting, accusation / denial, etc. In this respect, pairs can be characterised by a preferred organisation. Nevertheless, the occurrence of 'dispreferred seconds' has been also studied by researchers that have documented this type of responses in several social situations. For example, it has been found that for a first turn expressing a request, the preferred second turn would be compliance, and the dispreferred one would be a refusal. See Levinson (1983, p. 336) for a broader account of this and other dispreferred responses in adjacency pairs.

CA has been criticised because of its over-empiricist perspective that does not acknowledge the possibility of investigating meaning that might not be revealed through talk, but being constructed through other modes of action such as gesture, gaze, etc. (e.g. Goodwin, 1995). Similarly, CA seems to fail in the analysis of the use of other tools that provide an extra-conversational focus of reference for meaning construction such as in technologically enriched situations at home, school or work (e.g. Goodwin, 1997; Suchman & Trigg, 1993). Finally, CA does not address the use of some common functions of indirect reflexivity in language such as reported speech, where speakers may simultaneously display their understanding of the immediately preceding turn in the conversation into which they are engaged and their understanding of what occurred during a previous conversation or textual experience (e.g. Maybin, 1994, 1996b).

In addition, by developing only categories for the study of the sequential organization of talk, Conversation Analysts assume an anti-mentalist and positivist standpoint (van Dijk, in press) that leaves aside the study of the categories of the participants, i.e. what they really have in their agendas apart from their competence to participate in a conversation (Mäkitalo, 2003; Mäkitalo & Säljö, 2002). Finally, the use of only small excerpts of conversation to analyse how participants construct meaning in action in order to avoid the imposition of categories from the analyst, has been also challenged as something that does exactly the opposite of what conversation analysts have tried to avoid:

...one problem from a critical perspective is that Schegloff's sense of participant orientation may be unacceptably narrow. [...] in practice for Schegloff, participant orientation seems to mean only what is relevant for the participants in this particular conversational moment. Ironically, of course, it is the conversation analyst in selecting for analysis part of a conversation or continuing interaction who defines this relevance for the participant. In restricting the analyst's gaze to this fragment, previous conversations, even previous turns in the same continuing conversation become irrelevant for the analyst but also, by dictat, for the participants. We do not seem to have escaped, therefore, from the imposition of theorists' categories and concerns (Wetherell, 1998, p. 402-403).

Nevertheless, CA has been useful in creating a set of methodological tools that have helped to put into practice, although in a restrictive way, many of the principles developed by ethnomethodology that had not been operationalised previously. Also, CA has a merit in highlighting for the first time the different and specific nature of data comprising 'live' speech as compared to other approaches to the study of language that do not rely on data coming from real talk-in-interaction for their explanations (e.g. Philosophy of Language. See Austin, 1962; Searle, 1969). Thus, by developing these

conceptual tools Conversation Analysts highlight the situational aspect of language, meaning, and social rules in interaction:

In summary, CA analyses of the use of conversational practices are simultaneously analyses of action, meaning, context management and intersubjectivity because all of these features are simultaneously, if tacitly, the objects of the actor's actions (Heritage, 2001, p. 53)

Finally, Conversation Analysts seem to have taken on board some of the critiques they have received, in particular in relation to their exclusive focus on verbally explicit categories, and have published more recently articles where they acknowledge the role of other elements of conduct in interaction. For instance, Schegloff (1999) has published an article where he analyses an episode of interaction during a testing session between a man whose brain hemispheres had been surgically separated and a researcher. In the excerpt analysed in this article, the patient does not utter a single word but nonetheless Schegloff's analysis shows how in a very subtle and elegant way the patient is capable of adjusting to the situation and following instructions. Finally, this analysis contradicts the fact that the patient had been labelled after the experimental assessment as a person that "did not perform well on tests related to commands and indirect requests" (p. 424).

This shift from a narrow concern on conversation towards more open and inclusive ways of analysing discourse and interaction will be discussed further in section 4.1.7 on Interactional Sociolinguistics in this chapter. However, in the next section I will discuss the main issues involved in Discursive Psychology, another approach informed by principles developed in Ethnomethodology.

4.1.3 Discursive Psychology (DP)

Discursive Psychologists share with Ethnomethodology the interest for understanding the way in which participants act through the use of language generating their own rules

and methods that are adaptive responses to the situation. However, in contrast to Conversation Analysts, their major interest is not the construction of social order in conversations, but the role that language plays in accounting and defining psychological categories in interaction. By doing analysis that usually takes the form of critiques and reformulations of the relationship between reality and cognition, Discursive Psychologists have looked at a range of standard psychological topics such as attitudes, memory, the self, causal attribution, script theory, personality traits, categorization, prejudice and cognitive development (Edwards, 1999, p. 291).

Despite the formulation of the previous general goal as a shared focus for Discursive Psychologists, there are some differences amongst them that I will explain in more detail in the following paragraphs. In that respect, first I will describe the origins of this approach with Jonathan Potter and Margaret Wetherell, focusing on the concepts of 'variability', 'constitution' and 'interpretative repertoires' (Potter & Wetherell, 1987). Second, I will examine the line developed by Derek Edwards and Jonathan Potter (Edwards, 1997; Edwards & Potter, 1992), discussing their focus on talk-as-action, and the concepts of 'action', 'rhetoric' and 'accountability'. Finally, I will consider the discursive psychological framework proposed by Harré and Gillet (1994) in relation to the use of discourses by participants as a resource available to them to construct a 'position' in interaction.

4.1.3.1 Discourse and Social Psychology

In their highly influential book, Potter and Wetherell (1987) discuss their rejection of traditional methods in social psychology that are usually characterised by a quantitative approach based on the construction of psychometric tests and the conduction of surveys. This method leads to the development of cognitive models, usually including the theorization of social rules in psychological topics such as attitudes, attribution, and

beliefs. As a response, Potter and Wetherell elaborate a critique by discussing the properties of language in the construction of categories that are not taken into account in the traditional quantitative methods in psychology. The first property that they discuss is 'constitution'.

By 'constitution' they bring to light the way by which participants construct social objects by describing, evaluating, explaining, and in general, accounting for social phenomena. They give as an example how a version of the object 'Polynesian immigrants' is constituted by means of the previous accounting practices, in terms of criminality, lack of command of English, unemployment, and mental problems based on interbreeding practices. The argument of Potter and Wetherell is the illustration of how inherently difficult is to consider an object such as 'Polynesian immigrants' as a stable and discrete category, and how on the contrary, objects are meshed together with discursive accounting processes such as description and explanation.

In a related way, the concept of 'variability' in discourse is examined as a property that allows participants to present accounts that are not intrinsically consistent or coherent. Instead of looking at discourse as if participants were reflecting underlying stable attitudes or dispositions, their argument is that discourse is adjusted to the context allowing participants to construct different versions of an object, in many cases in a contradictory fashion. Nevertheless, these versions are completely logical for the discursive context in which they are uttered. They exemplify this by showing how a respondent to an interview varies in his/her account of whether Polynesians should stay in New Zealand or go back to their islands. The interviewee shifts from a focus on training them for highly skilled jobs, encouraging them to go back, and discussing the adverse consequences that this would bring to the economy, all of them as perfectly rational accounts in the context of their response.

Thus, 'constitution' and 'variability' are for Potter and Wetherell both a response to and a rejection of traditional methods in social psychology such as the use of questionnaires or Likert scales that limit the variability and construction of accounts of a subject about a topic of investigation in which researchers might be interested, such as attitudes or racism. In this respect, their proposal is to look for the different 'interpretative repertoires' that subjects might use in their accounting practices.

Hence, an 'interpretative repertoire', is "basically a lexicon or register of terms and metaphors drawn upon to characterize and evaluate actions and events" (p. 138), that are "recurrently used following particular stylistic and grammatical constructions" (p. 149).

They illustrate this concept by discussing the research carried out by Gilbert and Mulkay (1980; 1984) in relation to the type of discourse used by scientists in the area of biochemistry. Gilbert and Mulkay found that in the context of academic writing, these scientists used a type discourse characterised by chronological and logical authority, and where the author's commitments and involvements were never mentioned. That is, biochemists portrayed an image of neutrality through the implementation of impersonal rules that were presented as universally effective. Gilbert and Mulkay labelled this type of discourse as an "empiricist repertoire".

When biochemists were interviewed informally, the empiricist repertoire was also featured. Nonetheless, another type of discourse was identified as well in this context: the "contingent repertoire". Gilbert and Mulkay refer to this repertoire as portraying actions and beliefs heavily depending on "speculative insights, prior intellectual commitments, personal characteristics, unspecifiable craft skills, social ties and group memberships". Also the range of lexical, grammatical and stylistic resources used in this repertoire was much wider and personal, where "the general connection between

scientists' actions and beliefs and the realm of biochemical phenomena was much less clear cut" than in the empiricist repertoire (Potter & Wetherell, 1987, p. 149).

In this respect, the general conclusion of Potter and Wetherell about the usefulness of the concept of interpretative repertoire is that:

- I. They are available to people with many different group memberships, so that they are not intrinsically linked to social groups.
- II. They are used to perform different sorts of accounting tasks. Consensus about their specific use is not required.
- III. They are specific ways in which accounts are constructed. The focus is with language use, not cognition.

Drawing on the main concepts introduced in "Discourse and Social Psychology" (1987) briefly discussed in this section, and in other similar concepts of discourse analysis informed by ethnomethodological principles, Edwards and Potter developed their own proposal based on the premise of 'talk-as-action', that I will discuss next.

4.1.3.2 Talk as Action Model

Starting from the focus on how people construct versions of reality through their conversations, and the way these versions are established as solid, real and independent of the speaker (Potter, 1996, p. 151), Edwards and Potter emphasise further 3 other aspects:

1. Action. The focus of Discursive Psychology (DP) is on what people do with their talk in interaction, as opposed to using language to find out about their inner thoughts. That is, the focus is on action as opposed to cognition. Discursive Psychologists claim that by talking (and writing) people are acting in the world and that the nature of their actions can be revealed through a detailed discourse analysis (Horton-Salway, 2001; Potter, 1996).

2. Rhetoric. By analysing what people do with their talk, it is also possible to look at the ways in which people's versions of actions are generally planned to counteract real or potential alternatives that are part of ongoing arguments, debates or conversations (Potter, 1996, p. 152). Thus, accounts are displayed as factual by a range of discursive devices such as "vivid description, narrative, consensus, and corroboration" (Horton-Salway, 2001, p. 156). Using these discursive devices, speakers construct their version doing their best effort to avoid the possibility of having their version "dismissed or discredited on the grounds of stake and interest" (Horton-Salway, 2001, p. 155).
3. Accountability. When people talk, issues of agency and personal accountability are also being constructed. In this respect, identities are considered the product of a discursive practice that are "negotiated in the context of conversations and accounts for specific interactional purposes" (Horton-Salway, 2001, p. 162).

The proposal of Edwards and Potter has an explicit non-mentalist perspective by avoiding cognition and focusing on action and language use from a rhetorical and stylistic point of view. Yet, their focus on aspects of agency through the analysis of action and talk would involve the existence of intentionality in agents that are strategically trying to construct a position in interaction. Although this intentionality might be explained through the existence of a mind, for Edwards and Potter, mind would be acknowledged as a source of intentions only if it were invoked by the participants in a conversation, as a folk category that accounts for their behaviour. That is, the work of Edwards and Potter "often adopts an extreme social constructionist position and contends that there is nothing that is not text, i.e. that is not constructed through language" (Coyle, 2000, p. 254). In other words, from this perspective there would not be an objective reality, as objects will be always represented and constructed

through language (e.g. Edwards, Ashmore, & Potter, 1995). Both physical and other social objects such as cultures and institutions do not exist if they are not explicitly constructed in discourse, e.g. treated in language as if they had an enduring reality.

Having a less extremist position, Harré and Gillett (1994) agree with Potter and Edwards about the role of language in constructing meaning and identities. However, for Harré and Gillett, language is constituted in the form of discourses, as cultural resources available to participants. In this respect, discourses can be located in a given cultural group and this allows for the possibility of a pre-existing mind that can be public or private. Additionally, Harré and Gillett are predominantly interested in issues of identity that are afforded by the use of discourses by participants in a conversation. Next, I will elaborate further on this argument by describing their proposal, and focusing in particular in the discussion of their concept of 'position'.

4.1.3.3 The 'Discursive Mind'

The starting point of Harré and Gillett for their proposal of DP is the appreciation that psychology has undergone a big change in the last 20 years. They claim that behaviourism rejected the existence of mind by focusing only on the study of observable behaviour in simpler organisms such as rats and pigeons and avoiding any reference to concepts that might problematise what could be happening 'behind' chains of associations of stimulus and reinforcement such as drive, instinct, deprivation, thoughts, or cognition. According to Harré and Gillett, psychologists such as Bruner (1973) and Miller & Johnson-Laird (1976) who rejected the anti-mentalist position of behaviourism initiated the first cognitive revolution. Bruner and colleagues took as its main objective the identification and mapping of cognitive structures and their functioning that could lead to an explanation of what could be going on inside the 'black box' that behaviourism avoided.

Although this was an important change, Harré and Gillett argue that the problem was that the basic Cartesian principles of behaviourism were kept, in the sense that it was maintained a dualist perspective where mind and body are dissociated as different entities, and where the goal is to discover the machinery of mind informing the behaviour in the body. A second problem with this cognitive revolution was that the units of information were considered as mental images that were processed in the brain in a similar fashion as a computer calculates outcomes using rules in the form of programmes. Thirdly, even if this metaphor of humans acting like computers processing information were true, the issue of intentionality as a crucial difference between humans and computers, was still not resolved, e.g. how mental representations can account for human behaviour?

They claim that the response to these important deficiencies in the first cognitive revolution was to be found in the writing of Ludwig Wittgenstein (1953; 1961; 1975). According to Harré and Gillett, Wittgenstein started to discuss the properties of concepts and categories in his "Tractatus" (1961), very much informed by a Cartesian perspective where he provided long lists of concepts and their organisation in defined sets. After he finished this book, he was disappointed with the outcome as he thought that after all the analysis of categories that he had elaborated, he hadn't grasped the nature of understanding in humans. He thought that mapping the representations of concepts and their categories was just one step for achieving this goal, but more needed to be done. As a result, later he wrote another book titled "Philosophical Investigations" (1953) where he basically rejected what he had found in his Tractatus. First, he argued that mental representations such as concepts were made of words, and in that respect, they were located in languages. Second, he argued that languages are used to accomplish a huge range of tasks. In this respect looking at the way people use language to accomplish tasks in which concepts are embedded, meaning can be identified as

being constructed as part of human actions. That is, understanding and meaning need to be studied by looking at the intentions of actors using language in different situations. Finally, he concluded that unlike a Cartesian system of formal rules where concepts are supposed to be organised according to universal laws, concepts are in fact organised following informal rules of the participants in action. These informal rules, for instance, can be evident when we consider the correct and incorrect ways of using words in a given context.

Following Wittgenstein, Harré and Gillett argue that a second cognitive revolution in psychology needs to take into account what Wittgenstein has found, and in that respect, the study of discourse needs to become the focus of psychological research. Thus, for these researchers, psychological phenomena are to be studied as existing in discourse:

“Our delineation of the subject matter of psychology has to take account of discourses, significations, subjectivities, and positionings, for it is in these that psychological phenomena *actually* exist.” (Harré & Gillett, 1994, p. 22)

Also, in this respect, they propose three main principles informing the second cognitive revolution:

- I. Many psychological phenomena are to be interpreted as properties or features of discourse, which might be public or private. As public, it is behaviour; as private it is thought.
- II. Individual and private uses of symbols systems, which in this view constitute thinking, are derived from interpersonal discursive processes that are the main feature of the human environment.
- III. The production of psychological phenomena, such as emotions, decisions, attitudes, personality displays, and so on in discourse depends upon the skill of the actors, their relative moral standing in the community, and the story lines that unfold.

Up to this point it is possible to see some similarities between the proposals of Potter and Wetherell, and Edwards and Potter on the one hand, and the proposal of Harré and Gillett on the other. For instance, for all of these Discursive Psychologists the focus on language, the importance of context, the situated nature of meaning, and the privileging of informal rules of the participants over universal laws are shared. Nevertheless, whereas for Potter, Wetherell, and Edwards, their task is to document the different rhetorical processes by which participants construct meanings, for Harré and Gillett their purpose is not only to look at the ‘machinery’ of speech, but to look at the ways in which the use of discourses afford different positions to participants. This equals to an emphasis on construction of subjectivity, identity, and ultimately, a mind that is not only part of the situation, but it can be located in the agent. Their discussion of their concept of ‘positioning’ illustrates this point:

“Positioning highlights the importance of “making something of a situation” as one participates in it and according to one’s perception of it. This idea in turn underpins the concept of subjectivity, which expresses the way things appear to be or are signified by the speech and action of a person seen in relation to a discursive context. This is the closest our present approach comes to an account of the Cartesian “inner”. That idea arises because even though the meanings that inform our subjectivity arise in public discourse they may or may not be expressed or even named by the subject. If they are concealed or unexpressed then we can speak of the privacy or internality of the mind. If they are not named, not made explicit as meanings affecting one’s behavior, then we can speak of the unconscious.” (Harré & Gillett, 1994, p. 36)

Positioning in an interactive situation is carried out through the use and invocation of discourses that afford certain subject positions. Subject position changes through the processes of social interaction, and is constituted and reconstituted through the different discursive practices in which individuals participate (Davies & Harré, 1990, p. 46). The concept of subject position is contrasted to the notion of ‘role’ that has a more fixed

connotation. Finally, discourses are available cultural resources that have been developed historically in a speech community. In that respect, by using certain expressions and words in interaction, participants invoke cultural discourses that afford them different subject positions within the conversation.

Davies and Harré (1990) illustrate this process by using an example of two individuals that have been looking for a pharmacy for a long time walking in a neighbourhood with a subzero temperature. One of the persons is healthy (Sano), the other one is ill (Enfermada), and both are in search of a medicine for Enfermada. After some time walking without any success, Sano says "I'm sorry to have dragged you all this way when you are not well", and Enfermada replies with surprise "You didn't drag me, I chose to come", occasioning in turn surprise in Sano. Davies and Harré argue that Sano's utterance invokes a discourse of commiseration in the context of medical treatment that positions himself as an independent powerful man, and simultaneously positions Enfermada as a dependent helpless woman. In reply, Enfermada's utterance invokes a feminist discourse in the context of a joint adventure looking together for a medicine, which positions her as righteous suffragette and simultaneously positioning Sano as a chauvinist pig (1990, p. 55-57).

Davies and Harré discuss in more detail how the whole conversation evolved so that different discourses were invoked affording different subject positions in the context of offence, recrimination, and apology, and where different temporal selves were constructed for the participants in contrast to a conception of fixed individual personalities.

To conclude with the section of DP, I will return to the issue of culture that underpins the notion of discourse. It has been claimed by different social constructionist approaches that the role of culture is crucial for understanding the mutual relationships

between language, action, and mind. However, the notion of culture seems to be not very clear or universally shared amongst social researchers. In this respect, Crawford and Valsiner (1999) offer a definition that is linked to the important role played by language in human action:

Language is the primary means through which the achievements of past generations are preserved and passed on to coming generations, the primary means through which the 'semiosphere' (Lotman, 1989) –a 'layer' of meanings and symbols that mediates and constitutes our transactions with and in the world– accrues. This semiosphere –and its patterns, dynamics, functioning and contents– has been conceptualized, in cultural psychology, largely as language or discourse, and often though the analysis of language use, in terms of, for example, myths, voices, master narratives, social languages, discourse and cultural models. Speech is also seen as the *sine qua non* of representational means that organize psychological and social functioning. Language does not just express experience or run parallel to experience; rather language deeply interpenetrates experience (Sapir, 1921). Language is central to the process of enculturation –the induction of the young into the forms of functioning valued by the 'oldtimers' who socialize them." (Crawford & Valsiner, 1999, p. 263).

Accordingly, Harré and Gillett seem to agree with the importance of culture in the analysis of psychological phenomena, when they mention that "the crucial insight that enables us to explain psychological phenomena as patterns of discursive acts is that norms and rules emerging in historical and cultural circumstances operate to structure the things people do" (1994, p. 33). However, Edwards (1995) would make an important distinction between the aims of cultural psychology and DP:

"Where discursive and cultural psychology come together is in the recognition given to the primacy of representation (discourse, mediation, etc.), and its locus in situated social practices rather than abstracted mental models. In discursive psychology we also recognize that culture should not be treated as a causal variable, but that carries through to not treating

'mind' as a dependent one. It involves rejecting *a product and process psychology* of mental development, where mind is viewed as an objective developmental outcome, in favour of a discursive-constructive notion of mind as a participants' category. Mind figures as a count-as, described-as, kind of category... where the analytical interest is in how people (learn to) assign and use those categories in social practices. (p. 63-64).

The issue of how culture should be treated, either as informing, constituting or being constructed in practice is, I would argue, is part of an important debate about how human action and language are related. I have presented here some of the arguments that are currently taking place within the area of DP, and I will return to these issues in the next sections. Finally, I will offer my own position in this respect when I describe the methodological assumptions of my study.

In the next section, I will discuss another approach in discourse analysis that is quite dominant in the British, Australian, and to a lesser extent, American academic traditions: Systemic Functional Linguistics.

4.1.4 Systemic Functional Linguistics

Originally created by Michael Halliday (1978), Systemic Functional Linguistics (SFL) is an approach concerned with the construction of a theory capable of explaining how language, as a set of semantic, grammatical, lexical, phonologic, and graphologic resources are structured and systematically linked to the organization of context (Eggins & Martin, 1997, p.241). The relationship between language components and context, is 'realized' through the simultaneous construction of three types of meaning (or meta-functions) by speakers or writers (Butt, Fahey, Feez, Spinks, & Yallop, 2000, p. 5):

- I. Ideational: The use of language to represent experience and logic; namely, to talk/write about what is going on, what will happen, and what has occurred.

- II. Interpersonal: The employment of language to encode interaction; that is, to interact and/or to express a point of view.
- III. Textual: The utilization of language to organize experiential, logical and interpersonal meanings into a coherent and, in the case of written and spoken language, linear whole.

These types of meaning correspond to three types of context to which these different uses of language are linked:

- I. Field: What is to be talked or written about; the long and short term goals of the text. That is, what it is that the participants are engaged in.
- II. Tenor: The relationship between the speaker/writer and hearer/reader. In other words, who is taking part, the nature of the participants, and their statuses and roles.
- III. Mode: The kind of text that is being made: oral, written, pictorial, audiovisual, multimodal, etc. Namely, what part language is playing, what it is that the participants are expecting the language to do for them in the situation.

These types of context, according to Halliday (1978; 2002), are to be identified as different aspects of the 'context of the situation', a notion developed by Malinowski (1923; 1935) in contrast to the more global concept of 'context of culture'. By using language in a given situation, speakers/writers generate a 'register', that is the actual text where the impact of context of the situation is identified in the linguistic resources being chosen.

Similarly, the impact of the context of culture in the use of language is realized through the use of 'genres' a second layer of context regarding the cultural combinations of field, tenor and mode, and "how these are mapped out as staged, goal-oriented social processes" (Eggins & Martin, 1997, p. 243).

The relationships between language as a system on the one hand and the context of the situation and the context of culture on the other hand, are represented in the following diagram:

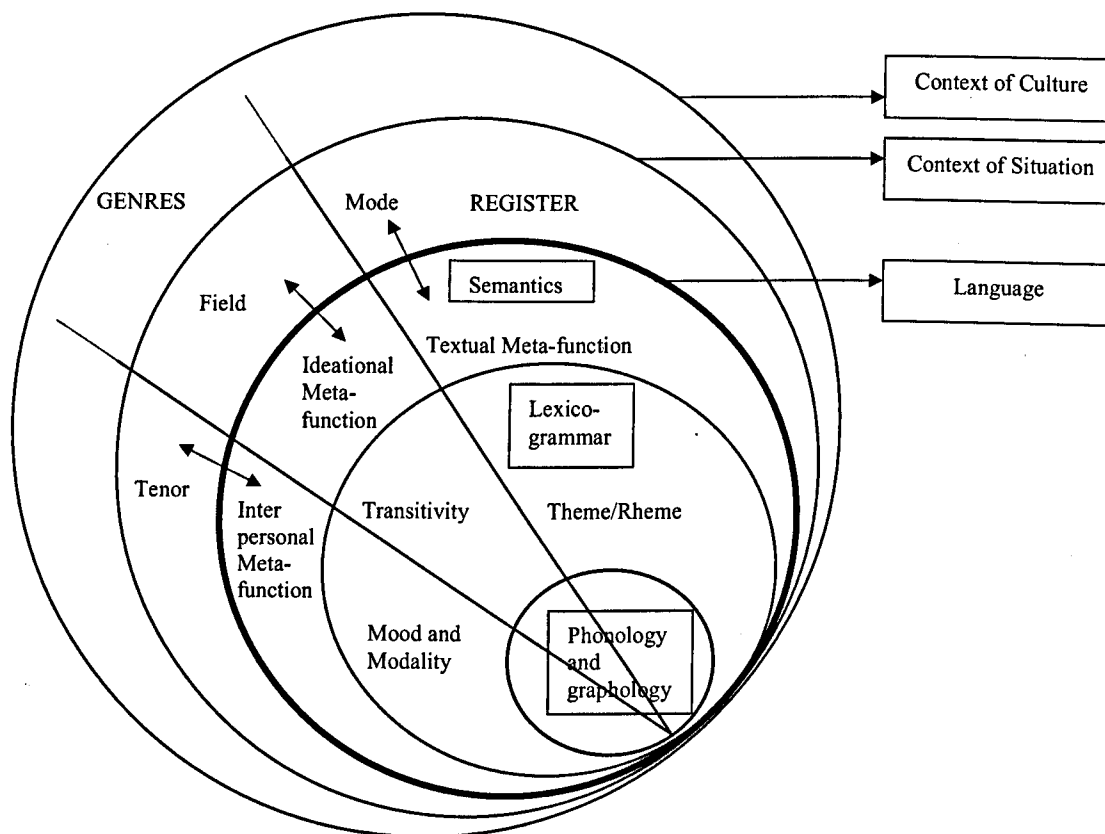


Figure 4.1 The system and functions of language in the context of situation and context of culture.

Based on Unsworth (2001, p. 37) and Egins and Martin (1997, p. 243).

In the diagram we can see in the most external circle the representation of the context of culture, as a global conception of how context is determined by the presence of culture (e.g. a set of relatively stable patterns of action and associated meanings), influencing the production of relatively stable patterns of utterances in the form of genres. In this respect, Egins and Martin (1997) acknowledge the influence that the Russian literary theorist, Mikhail Bakhtin (1986a) has had in this linguistic definition. Consequently,

they take the Bakhtinian notion of 'speech genre' and apply it to other types of uses of language, thus broadening "genre to include everyday as well as literary genres, in both written and spoken modes" (Eggins & Martin, 1997, p. 236).

The following inner circle represents the context of the situation, where the linguistic register is influenced by the three aspects of context that systemic functional linguists define at this level: field, tenor and mode. In turn, these three aspects of context are related with the following inner circle representing the language as an abstract system of symbols (e.g. similar to the notion of 'langue' proposed by Saussure, 1983), organised in different strata with a progressive order of abstraction (Unsworth, 2001, p.36-37). Thus, the first inner circle within the thicker line refers to the strata of semantics, the interface between social context and lexicogrammar where ideational, interpersonal and textual meanings realize field tenor and mode, respectively. The next inner circle stands for the strata of lexicogrammar, a resource for wording meanings through configurations of lexical and grammatical items. Ideational meanings are realized grammatically by the system of transitivity (e.g. the processes, participants and circumstances involved). Interpersonal meanings are realized by the grammatical systems of mood and modality (e.g. declarative, imperative and interrogative mood; possibility, usuality, attitude). Textual meanings are realized by the grammatical systems of theme and information focus (e.g. what comes first in a clause).

Finally, the most internal circle of the diagram represents the strata of phonology and graphology, comprising the systems of sounds, gestures and writing that are used to express language.

The grammar developed by Halliday and colleagues has been used to develop a pedagogical approach to the teaching of writing in schools (e.g. Martin, Christie, & Rothery, 1987). This pedagogy argues that writing needs to be taught in terms of the

genres available in culture in the form of types of texts that follow different moves according to their social aim, as well as using specific types of grammar and vocabulary. For instance, a simple narrative would be constituted by an initial orientation, a complication, a resolution, and a coda, with the use of typical phrases such as “once upon a time”, if we were dealing with the subgenre of fairy tales, for instance. In contrast, an academic article would be comprised by an abstract, a theoretical framework, a method section, results, and conclusion. The structure and vocabulary constituting these texts are not developed spontaneously in the classroom; on the contrary, students need to be “encultured” and taught formally about how to use them.

The genre approach is antagonist to the pedagogic style of ‘process writing’. In this approach, students are assisted to develop their own style for the creation of texts, so that they discover their own ‘writing voice’. In this respect, pupils are encouraged to participate in workshops and classrooms transformed in communities of writers, where teachers are also writing and help the students to develop particular types of practices such as initial discussion of ideas, drafting, conferencing, revising, editing and publishing. This suggests that reading and writing should be considered as social practices instead of a set of decontextualised skills (Scribner & Cole, 1981), “and that classroom methods should take account of the meaning and function of writing practices outside the school” (Maybin, 1996c, p. 153). This approach is informed by an anthropological linguistic approach that I will discuss further in a subsequent section dealing with ethnography of communication.

Although both positions seem to be antagonist, there are points in favour of each approach. In this respect, Janet Maybin concludes that:

“Both approaches claim to ‘empower’ students, the first [process writing] through giving them ownership of their writing and the second [genre approach] through equipping them with important linguistic skills. Taking both these approaches together suggests that they could be seen as complimentary rather than oppositional. There is a need to build motivation and learning opportunities into the process of writing, but also to ensure that students understand and can work with the linguistic structures needed for specific genres.” (Maybin, 1996c, p. 157)

To conclude, from a non-pedagogical perspective, and focusing more on the characteristics of this approach for the study of discourse analysis, I will discuss some of the critiques that have been addressed to SFL as a system for the analysis of discourse that does not seem to address the notion of context from the perspective of the participants.

In this respect, van Dijk (in press) argues that SFL main contribution is a theory of how social context impinge on language, at the level of register. However, SFL is weak as a theory for the explanation of social situations, and consequently, its notion of context does not address adequately the complexity of social encounters. More specifically, the characterization of context proposed by SFL such as field tenor, and mode represent an underdeveloped attempt to define context, and so far, it has been done in a rather heterogeneous way. For instance, ‘field’ is not only the contextual category for the ‘ongoing social activity’ but also it has been understood as the ‘subject matter’ of a text, a category that must be dealt at a global semantic level rather than at a level of context. Similarly, although ‘tenor’ describes the contextual properties of language in terms of participants, their relations and their roles, it does not take into account their group membership status or their knowledge as fundamental social components of situations. Finally, ‘mode’, characterized as the role that the language plays in the ongoing activity, sometimes has been interpreted to include rhetorical functions and even genres that are

not really part of contexts. From this critique of the notion of context in SFL, van Dijk (in press, p. 5) concludes that:

- The contextual categories are not original (they are largely due to variation stylistics).
- The notions are theoretically unproductive and inert (they have barely changed in many years),
- They are rather vague (even SF linguists have variable definitions of the categories),
- They are heterogeneous (theoretically very different notions are described by these categories)

As a result, van Dijk proposes a reformulation of the notion of context that can include other categories such as social domain, setting, time, place or direction, purposes, aims, knowledge, and related intertextual issues. Basically, he challenges the anti-mentalist approach of SFL, as “a stance shared with much of sociolinguistics, conversation analysis and discursive psychology, but not with cognitive anthropology” where “cognitive notions come in through the back door” (in press, p.10-11). In that respect, he elaborates:

“One of the [other] theoretical problems of the rejection of cognitive accounts is that there is no theoretical interface between the language system or social language use, on the one hand, and actual text and talk of individual language users on the other hand. Note that accounting for the cognitive dimensions of language does not imply a *reduction* to individualism, but only the possibility to *also* explain personal variations of language use. That is, we should not only account for the social dimensions of discourse, but also explain how and why all discourses are unique and individual, and that this ‘subjectivity’ must also be built into the context. Moreover, because meanings, knowledge or understandings may be *socially shared*, mental descriptions may be *both* personal *and* social. We here touch upon one of the most resistant and problematic

misunderstandings of virtually all ‘social’ approaches to language and discourse, namely that cognitive accounts are necessarily individualist and hence anti-social.” (p. 10)

Consequently, van Dijk’s notion of context is to be in favour of the existence of mind, and in that respect he asserts:

“The main thesis of my theory of context is that contexts should not be defined in terms of some kind of social situation in which discourse takes place, but rather as a mental representation, or *model*, constructed by the speech participants *of* or *about* such a situation.” (p. 13)

The debate about the existence of mind, whether as a cognitive, discursive, or material entity is one of the most problematic in social sciences. Although I am not necessarily in favour of using a concept such as “mental representation” (e.g. that usually invokes a sort of visual image), I would agree with van Dijk that a useful way to address the problem of mind is by looking at the way subjectivity is constructed by participants in a given social situation (e.g. the understanding and the meanings they construct in interaction). In the next section, I will discuss how another approach to discourse analysis has explained the existence of mind. In this respect, the ‘ethnography of communication’, and in particular, Hymes’s notion of ‘communicative competence’ comprises a set of useful resources to provide an account of language production as situated, and culturally determined by rules of speaking.

4.1.5 Ethnography of Communication

Ethnographers of communication (e.g. Hymes, 1974; Saville-Troike, 2003) are interested in studying the ways in which language is determined culturally. In this respect, researchers in this field have as their main goal the identification of culture and the rules of speaking that are followed in a given community. According to Hymes (1972a), the founder of this approach, language is constituted in social acts and is also a cultural product, a tool for members of a social group to communicate with each other.

Moreover, for Hymes (*ibid.*) speakers can use different channels or forms of expression, and in this respect language can be understood as composed by all forms of speech, including writing, singing and whistle derived from speech, horn call and other semiotic means (p. 53-54). These forms of expression are constitutive of social acts that take place within a discursive or speech community. Hymes considers 'speech community' as a fundamental concept, proposed as a descriptive basis for the social aspects of interaction, rather than being primarily a linguistic notion. He proposes that a researcher must start with a social group and to consider the speech varieties present in it, rather than starting with a speech variety. This perspective involves a qualitative definition expressed in terms of 'norms for the use of' language. As a result, a speech community can be defined as "a community that shares the same rules for the conduction and interpretation of speech, and the rules for the interpretation of at least a linguistic variety. Both conditions are necessary" (Hymes, 1972a, p. 54).

In other words, sharing a set of grammatical rules is not enough for competent communication. Hymes illustrates that there may be speakers constructing sentences following the grammar rules of English whose meanings might not be understood by certain persons. These speakers may be ignorant of what culturally counts as a coherent sequence, an affirmation requiring a response, a request, the markers for emphasis and irony, the duration of silence, or the forbidden topics in a given community. They may know the grammar, but they may not have the meta-communicative ways or opportunities to discover such social and cultural features. The knowledge of grammar and the knowledge of the rules of speaking are usually learned in parallel in a community. Nevertheless, they constitute different sets of skills: one is linguistic and the other is social.

The difference proposed by Hymes between these two types of skills emerges as his reaction to the theory of language developed by Chomsky (e.g. 1965; 1980). Chomsky stated that language cannot be learned as part of a reinforcement procedure as it was proposed by Skinner (1957) from a behaviourist point of view. In contrast, for Chomsky language is acquired as part of a cognitive mechanism where the rules of grammar are inferred and used in new sentences that might not have been uttered before. This mechanism is possible because of the existence of an innate structure that he called "Language Acquisition Device" (Chomsky, 1959). Hymes agrees with Chomsky's position up to this point, however, he rejects the methods employed by Chomsky to construct all his theory based on a narrowly defined scope for linguistics:

"Linguistic Theory is concerned primarily with an ideal speaker-listener in a completely homogenous speech-community, who knows its language [i.e. the language of the community] perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language [i.e. the language system] in actual performance" (Chomsky, 1965, p. 3).

According to Hymes, given that neither such ideal speaker-listener nor a completely homogeneous speech community can be found in everyday uses of language, it is necessary to shift the focus of investigation towards more ecologically valid methods of study for linguistics, such as ethnography. By doing this, it is possible to document the social (and therefore more 'real') practices that speakers are engaged with while they use language to communicate in a given community.

Because of this shift of perspective, instead of studying the linguistic competence (e.g. the knowledge of grammar) of ideal speakers as the main agenda in linguistics, for Hymes it would be more important to investigate the communicative competence (e.g. the knowledge of the cultural ways of using language) of real speakers. This new

agenda would not only address grammatically correct uses of language, but the identification of the sources of variations in speech:

“... the goal of a broad theory of competence can be said to be to show the ways in which the systemically possible, the feasible, and the appropriate are linked to produce and interpret actually occurring cultural behavior”
(Hymes, 1972b, p. 286)

Saville-Troike (2003), in a similar line adds that a theory of communicative competence “involves the social and cultural knowledge speakers are presumed to have which enable them to use and interpret linguistic forms.” Also, for Saville-Troike, the concept of communicative competence must be embedded in the notion of cultural competence, or “the total set of knowledge and skills which speakers bring into a situation” (p. 18).

With the purpose of studying the communicative competence of speakers in a given activity, Hymes (1972a) has defined the existence of a nested hierarchy of units of analysis that he called: communicative (or speech) situation, communicative event, and communicative act. Thus, in this hierarchy communicative acts are part of communicative events, which are, in turn, part of communicative situations. More specifically, a communicative situation is “the context within which communication occurs”. It is not always subject to a given location, and maintains a “general configuration of activities, the same overall ecology which communication takes place, although there may be great diversity in the kinds of interaction which occur here” (Saville-Troike, 2003, p. 23). Examples include ceremonies, court trials, fights, holiday parties, hunts, lovemaking, and a lesson in a school. According to Hymes, communicative situations are composed of speech and other kinds of events. They are not themselves subject to rules of communication, although rules of communication may refer to these situations as contexts (Fasold, 1990, p. 42).

Communicative events are both communicative and governed by rules of speaking. A communicative event takes place within a communicative situation and is composed by at least one speech act. According to Saville-Troike:

“A single [communicative] event is defined by a unified set of components throughout, beginning with the same general purpose of communication, the same general topic, and involving the same participants, generally using the same language variety, maintaining the same tone or key and the same rules of interaction in the same setting.”
(Saville-Troike, 2003, p. 23).

Examples of communicative events are categories of talk such as conversations, lectures, or formal introductions. However, some events are not as clearly defined with social labels, and in this respect their identification constitutes a fundamental part of doing ethnography of communication.

Communicative (or speech) acts, are identified by its “single interactional function, such as a referential statement, a request or a command, and may be either verbal or nonverbal” (Saville-Troike, 2003, p. 24). Also, according to Fasold (1990) a communicative or speech act in the area of the ethnography of communication has a slightly different meaning to the concept of speech act as defined in philosophy and pragmatics. Thus, in the case of the ethnography of communication “a speech act gets its status from the social context as well as from the grammatical form and intonation”, and can be constituted by more than one utterance (p. 43). For example, a joke (communicative act) that is embedded in a conversation (communicative event) within a dinner party (communicative situation) can be constituted by several speech moves, in the same way that greetings (communicative act) usually are made of pairs of conversational moves.

Given that the main goal for ethnographers of communication is to identify the rules of speaking of a speech community, the way to proceed to achieve this is through the elaboration of a taxonomy of components that could lead to the construction of structural and generative models “of sociolinguistic description, formulation of universal sets of features and relations, and explanatory theories” (Hymes, 1974, p. 35). In this respect, Hymes's starting point for elaborating an inventory of the relevant components to be identified in communicative events is the list of Jakobson's (1960) factors of communication. Elaborating Jakobson's model, Hymes proposes the following 16 components: 1) message form; 2) message content; 3) setting; 4) scene; 5) speaker or sender; 6) addressor; 7) hearer, or receiver, or audience; 8) addressee; 9) purposes-outcomes; 10) purposes-goals; 11) key; 12) channels; 13) forms of speech; 14) norms of interaction; 15) norms of interpretation; and 16) genres. Thus, the rules of speaking determining a given communicative event would be stated in terms of relationships amongst these components, perhaps prioritising some of them depending on each communicative event and the social group where any event takes place. For instance, there would be social groups where “rules of speaking will be heavily bound to setting; for another primarily to participants; for a third, perhaps to topic” (Hymes, 1972a, p. 66).

Finally, as a heuristic research tool, Hymes proposed a summarised version of these components organised as an acronym that creates the word SPEAKING: Settings, Participants, Ends, Act sequences, Keys, Instrumentalities, Norms and Genres. Of course, the word “SPEAKING” is just a mnemonic strategy for remembering the components to be identified, and not a coincidence.

S	Setting & Scene
P	Participants: Speaker or sender, addressor, hearer or receiver or audience, addressee.
E	Ends: Purposes-outcomes, purposes-goals.
A	Act sequences: Message form & Message content.
K	Key.
I	Instrumentalities: Channels and Forms of speech.
N	Norms of interaction & Norms of interpretation.
G	Genres.

Table 4.1. Components of communicative events

Hymes's approach has been criticised for not being rigorous enough in developing precise theoretical formulations about its subject matter. That is, according to Fasold (1990), ethnography of communication "has not developed theoretical models of the cultural aspects of human communication that are both precise enough to be applied to any human society in the world" (p. 62). Notwithstanding, Fasold (1990) also defends this apparent lack of theoretical development by pointing out that

"One reason might simply be that ethnographers of communication prefer to make clear the human values displayed in the cultures they describe, and do not think the methods used in the physical sciences are appropriate. Another reason is that they may be right. Quite possibly human culture is too complex and too varied to be captured understanding a small number of principles and a handful of units, as it is true in the physical sciences and even in the study of the syntax of languages. If so, it would be beside the point to complain that the ethnography of communication has not developed theories that look like the ones that a physicist would produce" (p. 62).

Also, Hymes and colleagues have been criticised for being too focused on the actors as determined by culture, but not taking into account more situated aspects such as

“conflict, change, cross-cutting issues of class, gender, race”, and other “dynamic, processual aspects of communication” (Maybin, 2003a).

Despite of these criticisms, I would argue that ethnography of communication provides a useful set of tools for studying language as a cultural phenomenon. Also the concept of communicative competence is an important feature related to the existence of ‘mind’ as something located both, in the individual (e.g. in a similar interpretations such as the one proposed by Chomsky), and in the society, as part of the cultural tools developed in the community of speakers where language is used. This position is similar to the one developed by Vygotsky in relation to the double creation of mind, as discussed in Chapter 2 of this dissertation, where mind is conceptualised as a material entity.

In relation to the situated aspects of communication pointed out by Maybin, such as conflict, change, and dynamics of interaction that might include issues of power, I will be looking at another two approaches to discourse analysis addressing these matters in the last two sections of this chapter. The first approach to be discussed is Critical Discourse Analysis (CDA), focusing in particular the writings of Foucault and Habermas, two philosophers of language interested in the use of power in language. Finally, in the last approach of this chapter I will expand the discussion of these issues in a more contemporary and contextualised perspective of the dynamics of language use: Interactional Sociolinguistics.

4.1.6 Critical Discourse Analysis

In this section, I will deal with two issues central to Critical Discourse Analysis (CDA) (Mesthrie, 2000): ‘power’ and ‘knowledge’. These two aspects of discourse analysis have been implied, although perhaps tangentially, in previous approaches revised in this chapter. For instance, for Conversation Analysts, the social order is constructed in interaction, and thus power is implicitly embedded in the ‘machinery’ of speech.

Similarly, for Discursive Psychologists such as Davies and Harré (1990), discourses afford the construction of subject positions that may be differentially valued in social groups. Therefore, although power and knowledge are implicitly included in these analyses, they have not been the main focus of the research agenda for these approaches. On the contrary, Michel Foucault, Pierre Bourdieu, and Jürgen Habermas have each paid particular attention to these issues by developing distinctive models and theories for understanding the nature of knowledge production, rationality and control in social practices.

Foucault (e.g. 1965; 1978; 1979) has looked at the construction of discourses as a set of practices that construct the objects that are spoken about in different disciplines. Consequently, knowledge is conceptualised as serving specific institutional purposes linked to the exercise of power. Bourdieu (e.g. 1977; 1986; 1991), on the other hand, is concerned with the construction of cultural capital comprising a set of cultural goods such as books and other physical media, but also academic qualifications, knowledge, skills, and linguistic practices. These forms of capital are officially authorised, and acknowledged as valuable in particular social fields and thus indexing social power amongst members of a given 'economic community'. Finally, Habermas (e.g. 1981a; 1984b; 1990) has developed a theory of communicative rationality where he argues in favour of the unity of reason as a universal pragmatic feature of human communication. In this respect, he proposes that human communication is only possible if participants follow certain ground rules and a dialogic orientation to shared understanding.

After having briefly presented the outline of these three positions, next I will only describe in more detail the work of Michel Foucault and Jürgen Habermas, for two main reasons. First, each of these authors would deserve complete chapters in order to cover in full the complexity of their intellectual projects, but the space in this dissertation is

limited. Second, although the work of the three authors is highly relevant for the analysis of power and knowledge, the work of Habermas has been central for the development of one of the main cultural tools analysed in this dissertation: the “Thinking Together Skills” (e.g. Wegerif, 2002; Wegerif, 2004; Wegerif & Mercer, 2000). In addition, the perspective of Habermas represents a response to Foucault’s insistence on the contested nature of truth, a claim that Habermas would challenge in his theory of communicative rationality. Therefore, the following sections will aim to describe the debate established between these two intellectual positions as a contribution to the development of a theoretical base for the analysis of the results of the main study. For that reason, I will leave for another opportunity the description of Bourdieu’s academic work, which despite being a significant reference in the analysis of power and knowledge at an institutional level, it is not so fundamental for the purposes of the research questions developed in this dissertation concerning the construction of categories and identities by participants in communicative events and situations.

4.1.6.1 Michel Foucault

Michel Foucault’s academic work is mainly concerned with the documentation of how knowledge, rather than being a static entity representing a single truth about the state of matters in the world, is instead a historical development of perspectives embedded in specific disciplines. From this point of view, knowledge is comprised by a set of practices and epistemological figures shared by a specific group of people associated to an institution. Moreover, the existence of institutions makes Foucault wonder to what extent knowledge, as embedded in practices, is determined and constrained by the existence of an agenda serving an ‘establishment’.

With this goal in mind, Foucault (1965) investigated madness as an object of knowledge invested in the complex system of institutions. In this manner, through historical documentation, Foucault showed how the notion of madness was constructed by the opinions of physicians and authorities in regular daily practices. Moreover, in contrast to a fixed view of madness as scientific or theoretical knowledge, Foucault demonstrated how the experience of madness was controlled and put into practice in different ways in specific historical phases. For instance, in the medieval period madness was described in conjunction with images concerning God's will, hell, and the end of time and the world. During the Renaissance, madness was conceived as an invasion to human life, and was treated in art with imaginative techniques. From the 15th century onwards, madness was conceptualised as existing within man, and the experience of madness took the form of moral satire, as an error of reason. In the classical age (1650-1800 approx.), madness was reduced to silence and the first hospitals especially dedicated to the treatment of madness with confinement and punishment were created. Furthermore, madness was experienced with scandal and shame; hence, families kept in secret the possible existence of mad relatives. In the late 18th century, mad patients were physically liberated but nonetheless placed under a moral educational and psychiatric discourse. Thus, the concept of patient was created and psychiatry started to emerge as a discipline. Likewise, psychoanalysis appeared and the figure of Sigmund Freud became prominent. As a result, patients were asked to talk to a figure of a quasi-divine and omnipotent doctor that would help them to restore reason by managing the pressure of instincts and drives in underlying psychic structures.

According to Foucault, all these ways of experiencing madness have been the result of structural changes in society, economics and science that have determined the design of treatments for each historical period. Thus, knowledge has served institutional agendas,

which have imposed authoritarian views in the management of madness. Accordingly, the development of different discourses about madness has been determined by different institutional concerns of social control and regulation through confinement, punishment and silence rather than being concerned with madness “in itself”. That is, the treatment of madness is inextricably linked to the development of practices of control that reveal the existence of an underlying exercise of power through the construction of institutional knowledge. Finally, Foucault would argue that the authoritarian view of reason has constrained the cure of madness that, in his perception, can only be obtained in the expression of madness through art and philosophy. Although not everybody agrees with Foucault in this respect, or with the impartiality and objectivity of his historical enquiry, the method that he developed was considered revolutionary and illuminative for the understanding of knowledge as embedded in social practices.

Later, Foucault applied this method to the study of other disciplines such as medicine (1973), and to the development of social sciences (1966). With regard to the study of social sciences, his main concern was the investigation of how man became the object of knowledge in Western culture. In order to answer this question, Foucault looked at three periods in History: the Renaissance, the classical era, and the modern era, uncovering each epoch’s respective historical ‘a priori’. Foucault called this process “archaeology”, and defined it as the process of investigating knowledge by excavating unconsciously organized epistemic systems. For Foucault, an archaeological study does not assume that knowledge accumulates towards any historical conclusion as it follows an agenda defined by power relations and accidents. As a result, the Foucauldian archaeological method ignores individuals and their histories, thus privileging impersonal structures of knowledge. Finally, given that these knowledge structures are embedded in statements of institutional authorities, archaeology is a task that doesn’t consist of treating discourses as signs representing content. It treats discourses, such as

medicine, psychiatry and social sciences, as practices that form the objects of which they speak (Horrocks & Jevtic, 1999, p. 64).

In a related manner, Foucault also described the role that different discourses, as invoked by particular authors, play in the construction of the subject, an inverse operation of the Cartesian conception of a pre-existing subject prior to knowledge. According to Foucault, the relationship established between an author and a given discourse is established in statements, which in turn determine the position that any individual must occupy in order to be the subject of that statement. For instance, the statements of a medical discourse construct the position of doctor, in contrast to a position of patient. More specifically, by statement (or in French, *énonciation*), Foucault means:

“...the laws operating behind the formation of things. These concern the *status* of the speaker (‘medical statements cannot come from anybody; their value, efficacy, even their therapeutic powers... cannot be dissociated from the statutorially defined person who has the right to make them’); the *sites* from which the statements are made (hospital, laboratory, library); the *positions* of the subjects of medical discourse (in relation to the perceptual field, new systems of registration, description, and classification, new teaching methods, other institutions). Far from referring back to the synthesis performed by a unifying subject, these different statuses, sites, positions of discourse manifest his dispersion. The unity of a discursive practice is given not by conscious subjectivities, but by a system of relations prior and external to the individual conscious activity” (Sheridan, 1980, p. 99).

In other words, for Foucault the subject is not constituted outside of discourse. Discourse becomes the source of the constitution of the human subject. Although Discursive Psychologists such as Davies and Harré clearly would share this claim with Foucault, they would not go as far as the latter to elaborate the consequences of this assertion. In this respect, Foucault would conceive the construction of the subject as a

genealogical process in which “the ‘author’ of a text would not be neither autonomous nor creative, but occupying a subordinate place within a given discursive practice” (Williams, 1992, p. 250).

Likewise, if the origin of discourse were located in institutions, this would imply, according to Foucault, that knowledge would be entangled in the networks of power, which are ever increasingly associated with the advance of knowledge in different disciplines. As a result, knowledge cannot be separated from power. Finally, if at the same time there is no knowledge outside of discourse (e.g. as a practice), and no discourse outside of language (e.g. opinions and statements of authorities), then language is power. The consequences of this argument are that if power and knowledge are inextricably linked in language, then the construction of meaning is rooted in struggle. That is, truth is a contentious issue rather than an absolute, and as such is the site of permanent dispute (Williams, 1992, p. 255).

This argument entails that on the one hand subjects would be completely decentred, empty and lack of consciousness before discourse, a posture that some would find unacceptable (e.g. Mesthrie, 2000). On the other, the idea of not having a clear and stable definition of truth as one of the most important building blocks of rationality has been challenged by Habermas in his analysis of the existence of ground rules and dialogical orientation in human communication. I will next explain in more detail the position of Habermas in the following section. However, I will just conclude the present by mentioning that Foucault has been highly influential in the development of genealogical discourse analysis (e.g. Carabine, 2001), and also in the analysis of literacy practices and the construction of situated identities, notably developed by Gee (e.g. 1990; 1999).

4.1.6.2 Jürgen Habermas

The central point in Habermas's intellectual project is the development of a theory of communicative rationality embedded in the identification of universal features of human communication. Thus, Habermas is interested in power, but taking a different stance to the one taken by Foucault. Rather than assuming that knowledge is always determined by an institutional agenda and that discourses afford subject positions differentially valued and hierarchically organised, Habermas is concerned with how knowledge can be also a product of shared understanding between subjects. Thus, knowledge would be grounded in the construction of intersubjectivity that in turn would require equal access to the expression of opinions and an even distribution of power amongst participants in a dialogue in order to maintain such shared understanding.

Therefore, Habermas considers that the Foucauldian conception of knowledge developed through historiography entails a relativistic stance that eliminates "the categories of meaning, validity and value" (Habermas, 1986, p. 286), and blurs any standard of truth. In contrast, Habermas proposes that we still need to acknowledge the existence of reason as an ideal that has allowed the development of democratic states grounded in increasingly stabilized networks of power, and not just anarchy resulting from institutional and personal agendas. Also, reason makes possible the existence of rational individuals acting consciously in society, and not only subordinated to institutional power, as Foucault would suggest (Outhwaite, 1994, p. 129).

In this respect, Habermas would consider that reason is not only grounded on empirical facts (such as in a positivistic position), but embedded in universal communication principles underlying the construction of intersubjectivity in dialogues. In addition, these communication principles lead to the construction of discourse ethics. In other

words, for Habermas (1984b, p. 68), rationality emerges out of the existence of four validity claims present in any linguistic communication:

1. Comprehensibility: That what we say is comprehensible.
2. Truth: That what we say is true in the representation of facts.
3. Rightness: That what we say is appropriate in terms of the establishment of legitimate interpersonal relations.
4. Truthfulness: That what we say is sincere, disclosing our subjectivity in an authentic manner.

Thus, for Habermas, every act of communication would imply that we could reach a consensus on the validity of these claims. In that respect, “we could only distinguish, as a matter of principle, between a genuine and a false consensus if we presuppose the possibility of an unconstrained dialogue to which all speakers have equal access and in which only the ‘force of the better argument prevails’” (Outhwaite, 1994, p. 40). This is what Habermas (1990, p. 87-89) calls the ‘ideal speech situation’. Additionally, according to Alexy (1990), the ‘ideal speech situation’ would be constituted by the following rules of argumentation:

- 1.1. No speaker may contradict himself
- 1.2. Every speaker who applies predicate *F* to object *A* must be prepared to apply *F* to all other subjects resembling *A* in all relevant aspects.
- 1.3. Different speakers may not use the same expression with different meanings.
- 2.1. Every speaker may assert only what he really believes
- 2.2. A person who disputes a proposition or norm not under discussion must provide a reason for wanting to do so.
- 3.1 Every subject with the competence to speak and act is allowed to take part in a discourse.

- 3.2.a. Everyone is allowed to question any assertion whatever.
- 3.2.b. Everyone is allowed to introduce any assertion whatever into the discourse.
- 3.2.c. Everyone is allowed to express his attitudes, desires, and needs.
- 3.3 No speaker may be prevented, by internal or external coercion, from exercising his rights as laid down in 3.1 and 3.2

According to White (1988), these rules “are intended to prevent barriers (created by deception, power and ideology) both to the initiation of discourse and to its being carried through in a way which allows no subject matter to remain immune from questioning”. Habermas’s main argument here is that the fulfilment of the conditions of ideal argumentation implies that the action context must have congruent normative qualities. These normative qualities “do not undermine the autonomy of each [participant] as a source of claims which have equal initial plausibility and of demands for justification to which others are obliged to respond” (p. 56).

Although Habermas proposes this speech situation as an ideal reference, he also admits that “actual contexts of argumentation do not often correspond to the ideal speech situation. Yet it is more than just a fiction, or a regulative idea in Kant’s sense of the term, since we do in fact have to assume its possibility” (Outhwaite, 1994, p. 40):

So far as we accomplish speech acts at all, we stand under the curious imperatives of that power which, with the honourable title of ‘reason’, I am to ground in the structure of possible speech. In this sense I think it is meaningful to speak of an immanent reference to truth in the life-process of society” (Habermas, 1984a, p. 126 translated in Outhwaite, 1994, p. 40).

Finally, another central issue in Habermas’s theory of communicative action is the “distinction between genuinely communicative use of language to attain common goals, which Habermas takes to be the primary case of language-use and ‘the inherent telos of

human speech', and strategic or success oriented speech, parasitic on the former, which simulates a communicative orientation in order to achieve an ulterior purpose." (Outhwaite, 1994, p. 45-46).

This distinction was proposed by Habermas using Austin's theory of speech acts (Austin, 1962), and analysing the relationship between locutionary, illocutionary and perlocutionary speech acts. A locutionary act involves saying something, an illocutionary act does something in the act of saying something, and a perlocutionary act produces a certain effect via doing something by saying something. Habermas claimed that perlocutionary effects, intended but not made explicit, are a sign of strategic action, as opposed to communicative action. This original distinction was criticised for the implausibility of the sharp distinction between strategic action and communicative action, which led Habermas to accept that this distinction is only valid where deceptive intention is present.

"...the action-theoretic distinction between strategically and non-strategically intended perlocutionary effects... I term those effects strategically intended which come about only if they are not declared or if they are caused by defective speech acts that merely pretend to be valid... one can no longer consider all perlocutions to be latent-strategic actions". (Habermas, 1981b, p. 240)

Habermas's theory has also been criticised for not being grounded in the analysis of situated real speech, where issues of culture impinge on the actual feasibility and possibility to produce grammatically and interactionally correct and completely valid utterances. In this respect, the concept of ideal communicative competence proposed by Habermas is challenged by Hymes's alternative concept of communicative competence (Hymes, 1996a) grounded on the existence of a real speech community and culturally mediated rules of speaking where social languages and other cultural tools need to be appropriated and mastered by members of these communities.

Additionally, Habermas has been challenged for the consequences of his theory on the nature of human agency. Habermas's development of the theory of communicative action relies heavily on the assumption that humans comply with the existence of a formal ethics of rationality (Taylor, 1991, p. 30). That is, according to Kant, in formal ethics actions are correct if the procedure to achieve a certain goal is rational. These would imply that humans would need to be, according to the validity claims and the rules of argumentation proposed by Habermas for the ideal speech situation, always congruent and formal in their actions, a situation that some would find unacceptable. On the contrary, theorists like Taylor would suggest that any plausible theory of communicative action would need to give a space for the possibility that humans may also follow a substantialist ethics. Thus, according to Aristotle, in substantialist ethics an action would be rational if it is in accordance to the 'good life', or in other words, an action could be conceived as rational if it is good for the agent, as a form of life to be realized. In this respect, Taylor (1991) would pose some questions to Habermas in relation to the fulfilment of the validity claims and rules of argumentation, and the construction of shared understanding in relation to the achievement of common goals: e.g. Why should I strive for reaching shared understanding? I may also have other aims, other interests. "Why then should I prefer rational understanding? Why should precisely this aim occupy a special position? Why should I not attempt to reach my desired goal at the cost of being slightly inconsistent?" (p. 31). According to Taylor, attempts to justify this, as derived from the structure of the situation of speech by a discursive ethics do not suffice in the case of such radical questions. Our deliberation in order to act is in many cases linked to theories of human motivations. Taylor labels these theories as "evaluative frameworks". They are historically and culturally constituted as a result of upbringing and participation in social practices. Evaluative frameworks "provide the background, explicit or implicit, for our moral judgements, intuitions, or reactions...To

articulate a framework is to explicate what makes sense of our moral responses.” (Taylor, 1989, p. 26). In this respect, following Taylor, Arto Laitinen (1995) proposes that:

“...what we normally think of as a mere decision to act in such-and-such way, is in fact a judgement guided by the evaluative framework, and we need not be explicit about it. In the context of justification, articulation plays a central role, but in the context of application it is not necessary at all... Actions are rational if the conclusion follows from the premises, and if the premises are valid. As we have seen, neither the premises nor the conclusion have to be linguistically articulated. The rationality here is neither procedural nor explicit. The agents neither follow explicit procedures nor explicate their conclusions. The rationality is implicit and substantial: the measure of rationality is getting it right, and this may not need any articulation of the implicit views”.

These remarks remind us the need to ground any discourse analysis in the existence of real agents and utterances situated in specific cultural contexts. The next, and last approach, describes an attempt to produce a discursive analytic approach carefully paying attention to the fulfilment of these requirements. To conclude this section about Habermas, I will mention that his theory has nevertheless been highly influential in the reformulation of political science and in the analysis of contemporary democratic practices in different societies (Outhwaite, 1994, p. 120). Additionally, his work has informed to some extent the design and promotion of educational dialogues in philosophy education (e.g. Wegerif, 1998) and as a general tool for ‘thinking together’ in several areas of the curriculum (e.g. Mercer & Wegerif, 2003; Rojas-Drummond et al., 2003; Wegerif, 2001, 2004; Wegerif & Mercer, 2000).

4.1.7 Interactional Sociolinguistics

Interactional Sociolinguistics (IS) started as an approach informed by the ethnography of communication (e.g. Hymes, 1974) in relation to the role of culture in the emergence

of different speech varieties and the structure of communicative events and acts. Nevertheless, Hymes's idea (1972a) that culture could be represented in grammar-like rules of speaking as a relation between components of speech events to be followed by participants in a rigid procedural way was challenged by some ethnographers who found such a conception of culture too deterministic. For instance, in his ethnographic work in small villages in India and Norway, Gumperz (1972; 1982) studied the regularities in language usage amongst members of the same cultural group. Initially, following Hymes's approach, he looked at these regularities as reflecting normative rules specifying 'appropriate ways of speaking' for each cultural group. However, he found that although this approach was useful to characterise the rules of speaking at a speech community level, it was "fundamentally flawed when applied to situated processes of verbal interaction" (Gumperz, 1995, p. 102).

As a result, he started to analyse situated dialogues in order to investigate the dynamics between culture and language use as actually occurring in conversation. In this respect, he started to use CA techniques (e.g. J. M. Atkinson & Heritage, 1984) to look at code switching strategies such as linguistic variation and prosody as indexical phenomena for the construction of meaning and the interpretation of situations by participants.

The attempts of Gumperz to develop an approach capable of providing an account of cultural and linguistic diversity from an insider's perspective has been pursued by several other researchers in a similar fashion (e.g. Gumperz & Levinson, 1996; Marková, Graumann, & Foppa, 1995; Sarangi & Roberts, 1999) confirming the emergence and consolidation of this perspective in discourse analysis. As mentioned before in this section, IS is characterised by a combination of ethnography and CA, and in particular is interested in the development of specific methodological tools concerned with the study of: a) Agency and cultural diversity; b) Asymmetry in situated speech

events; c) Indexicality and contextualisation; and d) Framing of situations. Next, I will discuss each of these concerns in turn.

4.1.7.1 Agency and Cultural Diversity

Interactional Sociolinguists are interested in the way participants construct meaning from different simultaneous perspectives. That is, although it is possible to acknowledge the existence of a common goal to be achieved by a group of people in interaction, IS is interested in showing how each participant pursue her/his own intentions by means of the different conversational moves they take and the linguistic choices they make in each of them. Thus, linguistic diversity is investigated as a situated yet culturally informed phenomenon where participants make inferences about the definition of the situation, the intentions of a given speaker, and the nature of what is required next in a conversation. Thus, by focusing on communicative practice (Hanks, 1996), IS seeks to bridge the gap between those who look at language usage as directly reflecting macrosocietal conditions, political forces, and cultural models, and those who study language as an interactive process where society is constructed without any prior existence of extralinguistic categories informing such interaction.

Methodologically, in order to operationalise this claim, IS analyses focus on the complementary attributes of ethnography and CA. Ethnography helps to get an understanding of the communicative ecology of the practice under investigation, and CA provides the analytical tools to understand how interaction is jointly organised as a set of conversational strategies. By doing this, the criticism of ethnography in relation to representing culture only as a macrosocietal category determining behaviour and of CA's concentration on what is overtly lexicalised seem to be mutually resolved. In other words, according to Roberts and Sarangi (1999), ethnography would be providing the "why" part of the analysis, and CA would be the method tackling the "how".

In this sense, Gumperz (1999) asserts that the main agenda for IS analyses can be expressed in the following way:

“Communicative practice largely rests on the discursive practices of actors acting in pursuit of their everyday goals and aspirations. Speaking, when seen in practice perspective, is not just a matter of individuals’ encoding and decoding of messages. To interact, as conversational analysts have shown is to engage in an ongoing process of negotiation, both to infer what others intend to convey and to monitor how one’s own contributions are received. In other words, at issue are shared interpretations rather than just denotational meaning. And background knowledge that goes beyond overt lexical information always plays a key role in the interpretive process. IS analysis therefore concentrates on speech exchanges involving two or more actors as its main object of study. The aim is to show how individuals participating in such exchanges use talk to achieve their communicative goals in real life situations by concentrating on the meaning making processes and the taken-for-granted background assumptions that underlie the negotiation of shared interpretations.” (p. 454)

Also, for Gumperz (1995), this taken-for-granted assumptions would be culturally bound as a set of resources that are used by the participants to make sense of the situation. In this respect, another of the assumptions in relation to the intentions of conversants and the variety of cultural and linguistic resources used to pursue their goals is that these resources are not always shared completely by all participants. Therefore, in contrast to the ideal speech situation proposed by Habermas or the ‘message transfer’ model proposed by Saussure, which conceptualize communication as characterised in principle by symmetrical positions, complete intersubjectivity, and equal interpretation of situations, in IS, these attributes need to be demonstrated as part of the analysis. That is, for Interactional Sociolinguists, asymmetry and ambiguity would be an essential part of any communicative event resulting from the diversity of

intentions and inferential procedures between participants. I will look at this issue in more detail in the next section.

4.1.7.2 Asymmetry

According to Linell (1998), there is a difference between a classical concept of dialogue and a modern, empirical one, in terms of collaboration and equilibrium in the management of interaction. The classical notion of dialogue is

“basically an open interaction characterized by cooperation and symmetry (with equal opportunities for participants to take turns and develop topics) and aiming exclusively at truth finding by penetrating argumentation, *dialegesthai*, without any coercion from any party and without this process being impeded by personal preferences, emotions, power, utility considerations etc., and with a deliberate avoidance of closure and finality, i.e. the dialogue is always an ongoing process with participants open for continuous reconsiderations.” (p. 11)

Linell considers that Habermas is one of the clearest exponents of this position with his conception of the ‘ideal speech situation’ and associated validity claims and rules. Similarly, Linell argues that the concept of “ordinary conversation” (J. M. Atkinson & Heritage, 1984) in modern CA analyses implies the same assumptions of interaction symmetry and absence of constraints on turn taking and topic development. Thus, this classical definition of dialogue implies a normative and ideal stance rather than an empirical one embedded in authentic and morally charged relationships (Crapanzano, 1990). As a result, Linell argues in favour of a more modern and empirical notion of dialogue defined as “any interaction through language (or other symbolic means) between two or several individuals who are mutually co-present” (Luckman, 1995). Linell claims that the focus on symbol based interaction removes the conditions of cooperation and symmetry from the essence of dialogue and additionally opens the space for other forms of social coordination that may include asymmetries and

competitive positionings. That is, Linell recognizes that social collaboration is needed to carry out any communicative practice. However, a strict interpretation of dialogue making the achievement of shared understandings something compulsory is inadequate because it leaves out any possibility of analysing “vagueness, ambiguity, polivocality, misunderstanding, conflicting interests, concealment, opposition, power, domination, and fragmentation of participation and knowledge” (Linell, 1998, p. 11), that are also constitutive of social interaction. Thus, he is in favour of using “social coordination”, rather than “collaboration” as a more comprehensive term covering these other phenomena in the analysis of talk-in-interaction.

Likewise, Linell has focused on the identification and development of asymmetry into what he has called division of communicative labour. In this respect, for Linell (1998), such a division of labour would imply the distribution of epistemic and practical responsibilities that can be characterized by a) complementarity rather than symmetry in participant roles, b) the existence of competing goals that nevertheless require coordination to maintain the interaction, and c) the nested nature of goals within overarching projects being pursued by participants (p. 221). Correspondingly, Linell and Marková (1993) have looked at the necessary complementarity of teachers and students for carrying out an instructional dialogue that nevertheless had been previously analysed by others (e.g. Sinclair & Coulthard, 1975) as if it depended completely on the intentionality and management of the situation by the teacher. Likewise, Goodwin (1997) has looked at how the interpretation of apparently universal categories such as “black” can only be achieved by means of the co-construction of local meanings of that colour (e.g. “jet black”) by participants in a situated activity system (e.g. a geochemistry lab and associated practices), who perform asymmetric roles (e.g. an expert researcher and a novice student).

In a similar way, the division of communicative labour has been analysed in episodes of co-construction where either language- or speech-impaired persons are involved in communicative interaction. Linell argues that these episodes show even more dramatically how such division enables the participants to achieve collective goals successfully, despite the asymmetrical nature of the interaction. For instance, Linell (1998) uses the analysis of the interaction of an occupational therapist and an aphasic man who manage to achieve together an exploration of the man's leisure interests. In the same way, Goodwin (1995) shows how a heavily speech impaired man who can only say "yes", "no", and "and", manages to co-construct joint understanding with his nurse and wife, and to say a wide range of different things while performing diverse kinds of actions, by making use of resources provided by the speech of others. Also, in section 4.1.2 of this chapter I discussed Schegloff's analysis (1999) of non-verbal behaviour of a man whose brain hemispheres had been surgically separated and a researcher, and how this man shows clear signs of understanding of the situation despite of the negative evaluation of the researcher.

Finally, division of communicative labour as a way by which participants distribute different tasks and assume different roles in a communicative situation can allow for the classification of communicative activities in families. The following table, adapted from Linell (1998, p. 258) illustrate this:

		Pattern of Participation	
		Relative Symmetry	Relative Asymmetry
Point of collective activity	Cooperation	Symmetrical, consensual equitable interaction, e.g. some informal conversations	Asymmetrical division of labour (complementarity) in the pursuit of common goals, e.g. many professional – lay interactions
	Competition	Symmetrical, competitive interactions, e.g. full-blown arguments, quarrels, verbal duels	Asymmetrical interactions, with subordinate party exhibiting passive resistance, e.g. trials and interrogations with resistant or reticent interviewee

Table 4.2. Communicative activities classified in two dimensions: Cooperation / Competition vs.

Symmetry / Asymmetry

In this section, I have been discussing how communication entails both basic social coordination and the establishment of division of labour to co-construct meanings. In the next section, I will discuss in more detail the mechanisms that allow participants to carry out such co-construction in context. Thus, I will discuss the properties of indexicality and contextualisation, two main concepts used by Interactional Sociolinguists to investigate how participants link cultural and situated meanings in interaction.

4.1.7.3 Indexicality and Contextualisation

The concept of indexicality has its origins in the semiotics developed by Charles S. Peirce (e.g. 1998). For Peirce, the model of sign would include a relationship of three different elements (Chandler, 2002, p. 32):

1. The *representamen*: the form which the sign takes. This is similar to the concept of “signifier” by Saussure, or in general terms to the “sign vehicle” (e.g. the material part of the sign).

2. An *interpretant*: not an interpreter but rather the sense made of the sign. This is similar to the concept of “signified” by Saussure (e.g. the mental *concept* represented by the signifier)
3. An *object*: to which the sign refers, what the sign stands for. This element is not present in the dualist Saussurean model. For Peirce, objects are living in the world, and can be physical. Nevertheless, a sign can also stand for abstract concepts or fictional entities.

The relationship between the sign and the object is established in different degrees of conventionality. In that respect, for Peirce there would be three types of signs (Swann, Deumert, Lillis, & Mesthrie, 2004):

1. Symbols: A sign which stands in an arbitrary relationship to the object or concept it denotes, and is understood by convention, for example a red light meaning ‘stop’. Language is a symbolic system, in which words are associated with objects, ideas and actions by convention.
2. Icon: A kind of sign which, rather than having an arbitrary or conventional relation with the object it denotes, represents some aspect of the object itself. Thus, drawings are iconic, as are the images or figures used in religious worship. Words are not usually iconic, apart from instances of onomatopoeia, for example, a word like *buzz* simulates the sound of a bee.
3. Index: A sign which has some kind of logical relation to the object it stands for, rather than having an arbitrary relationship with it. Indexical signs and objects can be connected physically (e.g. by contiguity) or causally (e.g. a sign is a result of the presence of the object), and the link can be seen or inferred. A classical example is that smoke indexes fire. However, other examples include

“‘natural signs’ (smoke, thunder, footprints, echoes, non-synthetic odours and flavours), medical symptoms (pain, a rash, pulse-rate), measuring

instruments (weatherclock, thermometer, clock, spirit-level), 'signals' (a knock on a door, a phone ringing), pointers (a pointing 'index' finger, a directional signpost), recordings (a photograph, a film, video or television shot, an audio-recorded voice), personal 'trademarks' (handwriting, catchphrase) and indexical words ('that', 'this', 'here', 'there')." (Chandler, 2002, p. 37)

According to Swann, et al. (2004), in IS and linguistic anthropology, indexicality is extended to refer to the way in which aspects of language are connected to a sociocultural context (p. 143). For instance, words or phrases can 'index' the presence of an object (e.g. this, that, those), a person (e.g. I, you, we), a past or present experience (e.g. now, then, yesterday), or a place (e.g. up, down, below, here). In summary, deictic elements function indexically in the context of speaking, and more broadly, may index relations between speakers and particular cultural contexts.

Indexicality is a useful concept that draws attention to the situated processes of meaning-construction in terms of the 'existential' connections that users definitely make between the sign and the social world which participants inhabit. However, one difficult point with the concept of indexicality is that sometimes it is not an easy task to pin down what are the cultural categories being applied by participants in a given situation, especially if they are not lexically articulated. In this case, the participants in a conversation (and consequently, the analyst) need to put in practice different inferencing processes that need to be grounded in certain communicative signs that index what is being at stake in the situation. In this respect, Gumperz has developed the concept "contextualising cues".

For Gumperz (1999), a contextualization cue is

"...any verbal sign which when processed in co-occurrence with symbolic grammatical and lexical signs serves to construct the contextual ground for situated interpretation, and thereby affects how constituent messages

are understood. Code switching is one type of such contextualization cue. Others include phonetic enunciation, along with prosody (i.e. intonation and stress) rhythm, tempo and other such suprasegmental signs... As metapragmatic signs, contextualization cues represent speakers' ways of signalling and providing information to interlocutors and audiences about how language is being used at any one point in the ongoing exchange. What sets them apart from communicatively similar lexicalized signs, is that they are for the most part intrinsically oral forms [e.g. there are no written contextualizing cues]. Since no utterance can be pronounced without such signs, contextualisation cues are ever present in the talk, and to the extent they can be shown to affect interpretation, they provide direct evidence for the necessary role that indexicality plays in talk." (p. 461)

Additionally, Gumperz (1995) distinguishes between two types of contextualisation. The first type is at the level of background knowledge of activity types, that is, their understanding of what an exchange is about, the topics that can be discussed, the norms of interpersonal conduct, values, communicative goals and purposes that are conventionally associated with these exchanges. The second type deals with the ability of participants to perceive and recognize the significance of relevant contextualization cues and to control the principles that govern their sequential deployment in talk.

Finally, these levels of contextualization are closely related to the concept of "frame" (e.g. contextualising cues frame a speech event) developed by Goffman (1974) and used in IS as an important construct as well. Next, I will discuss in more detail this concept.

4.1.7.4 Framing

The concept of frame has its origin in the work of Gregory Bateson (1972), an anthropologist and linguist who studied metacommunicative features of social interaction. Studying monkeys, Bateson discovered that the establishment of social interaction was only possible through the understanding of metamessages. For instance, Bateson noted that in many situations monkeys could interpret as a game an aggressive

act of another monkey, and that this was connected to certain cues that indicated that such act was not intended to be as hostile as it would originally have seemed. Bateson proposed that these cues were conveying a metamessage such as “this is play”, that would ‘frame’ the hostile moves as play. Therefore, according to Tannen (1993b), in this and in other studies Bateson demonstrated “that no communicative move, verbal or nonverbal, could be understood without reference to a metacommunicative message, or metamessage, about what is going on –that is, what frame of interpretation applies to the move”. (p. 3).

Bateson’s work has been very influential in research in communication studies and psychology, in particular in relation to family therapy. In sociology, the most important researcher following this approach has been Erving Goffman. Goffman (1974) proposed that frames are “schemata of interpretation” and “principles of organization” that are employed by participants to construct a particular definition of the situation (p. 21).

The term ‘schemata’ used by Goffman in this definition seem to have a cognitive connotation in relation to the location of these interpretative resources. In other words, it seems that frames and schemas could be interpreted as closely related concepts. In this respect, however, Tannen makes a clear distinction between the two of them. According to Tannen (1993a), Goffman thought of frames in a more interactive fashion than a schema. Thus, frames are necessarily related to the interpretation of what is going on in interaction, an essential part of social exchanges that is required to interpret utterances, movements and gestures of participants. As participants frame their exchanges, they also negotiate different positions resulting from the understanding of the rules of the situation. More specifically, Goffman (1974) used the term “footing” to refer to the negotiation of interpersonal relationships or “alignments” of an individual to a particular

utterance that constitute those situations (p. 128; 227). Thus, specific social positions are afforded by the alignment of participants to a given frame.

On the other hand, according to Tannen (1993a), knowledge schemas are “the participants’ expectations about people, objects, events, and settings in the world, as distinguished from alignments being negotiated in a particular interaction” (p. 60). That is, according to Tannen, whereas frames would involve the active interpretation of social situations and how to participate in them, schemas would exist prior to the experience, as stored background knowledge.

However, for others, the most important feature of the concept of frame would not be its apparent relationship to the notion of schema, but its usefulness to describe how participants create multiple layers of meaning in relation to the transformations of the understanding of an activity (Maybin, 1996a; Swann et al., 2004). That is, in other words, participants use frames as available resources to transform continually the ways in which a given situation may be interpreted. Goffman (1974) illustrate this process of transformations in the following example:

“The sawing of a log is an untransformed, instrumental act, the doing of this to a woman before an audience is a fabrication of the event; the magician, alone, trying out this equipment, is keying a construction, as is he who provides the direction in a book of magic, as am I in discussing the matter in terms of frame analysis” (p. 157)

Additionally, the different layers of meaning resulting from the framing of a situation can also be extended by the concept of ‘keying’. Goffman (1974) defined ‘key’ as a “set of conventions by which a given activity, one already meaningful in terms of some primary framework, is transformed into something patterned on this activity but seen by the participants to be something quite else” (p. 43-44). In other words, an activity that is already meaningful can be transformed so that it is understood as a different type of

activity. For instance, if two men seem to be struggling, somebody may ask, “What’s going on?”, just to receive the response of “They are only playing, not fighting”, which would ‘key’ the situation in a completely different tone.

Finally, according to Maybin (1996a), Goffman’s frames

“... can be either natural and unalterable for example concerning time, or social and malleable for example concerning cultural values. Different people may have rather different frames for a shared event (for example one person sees it as an argument and the other as a joke), frames can be broken, or disputed.” (p. 33)

That is, the multiple layers operating in a situation are the result of the continuous negotiation amongst the participants about what is going on in the interaction.

Goffman provided a rich vocabulary for describing the way participants construct meaning in social exchanges from an insider’s perspective, an idea that he pursued following ethnomethodological principles. However, despite this rich vocabulary, Goffman did not provide the precise methodological tools to use his concepts in transcripts of real speech. In this respect, IS, and in particular Gumperz’s theory of contextualisation cues have incorporated the notion of frame into the heart of this approach to discourse analysis. By doing this, and drawing on ethnography and CA, IS has developed a set of methodological resources which are useful to operationalise many of the theoretical insights and concepts proposed by Goffman, so that in turn, issues of communicative intentionality, asymmetry, power, and the ever present possibility of ambiguity in the negotiation of meaning can actually be mapped in discourse.

4.2 Conclusion

In this chapter, I have discussed some of the most important approaches in sociolinguistics and discourse analysis that have informed in several degrees the data collection and analysis that I have carried out in the main study of this dissertation. They are all part of a long conversation about concepts and methodological tools in different language-based disciplines that has made me aware of the current debate about the way meaning is constructed in social interaction, and subsequently, has led me to decide how to use certain elements of this debate in my own research.

In this chapter, initially I looked at ethnomethodology as an approach that has been one of the first ones in pointing out the importance of studying social phenomena from an insider's perspective. Avoiding the idea of looking at subjects in interaction as 'cultural dopes', ethnomethodology proposed to study the rules and methods that participants use to act in a given situation in a rational way. I discussed how despite these important insights about the nature of human agency, ethnomethodologists did not provide a set of clear methodological tools for applying their concepts to the analysis of talk in interaction, gathered in social settings.

Subsequently, Conversation Analysts used many of the concepts developed in ethnomethodology to build up a method aimed to discover the rules and procedures by which participants manage conversations, which in turn were conceptualised in CA as one of the most important mechanisms by which society is constructed. Therefore, the study of turn taking, sequential positioning, and the collocation of adjacency pairs have been one of the main outcomes of CA's research agenda. Nevertheless, I also showed how CA has been criticised by taking a too empiricist focus on the 'machinery' of speech, without incorporating to the analysis the study of the construction of categories by participants, apart from the conversation strategies they use.

DP took on a similar stance to CA by focusing on language use rather than cognition. However, in contrast to CA, Discursive Psychologists are mainly interested in the construction of categories in conversation, as a shared dynamic context. I have suggested that although DP has been useful in the understanding of the rhetorical devices used by participants to construct meaning and subject positions in conversation, their concept of what can count as a category is quite limited since categories are only acknowledged as valid when they are articulated explicitly, or when they are thematised as the focus of interaction in conversation. Thus, I agree with the criticisms that have been directed to DP (e.g. Coyle, 2000) for its extremist constructionist approach to cognition and its rather underdeveloped notion of context that is limited to what is explicit at a given moment in a situation.

SFL, on the other hand, is an approach concerned with the construction of a general theory in linguistics capable of explaining how language is structured and systematically linked to the organization of context. In this respect, SFL has been successful on the development of a complex metalanguage to look at how context impinge in language use. Nonetheless, SFL has not been efficient in explaining how language can be used by participants to construct their own categories of meaning that do not match in many respects with the metacategories developed by Halliday and colleagues to classify language use in terms of ideational, interpersonal and textual meanings. In this respect, I agree with van Dijk (in press) in the elaboration of this critique.

In the chapter, I also discussed how ethnomethodology, CA, DP, and SFL share a non-mentalistic methodological perspective in the sense that all these approaches take a stance in which mind is not considered to be an entity existing prior to any social encounter, and where consequently meaning is only constructed through language, in interaction,

without any reference to individual minds or similar constructs such as 'mental representations', 'cognitive schemas' or 'cultural models'. That is, I have argued that for all these approaches, a cognitive interface is not necessary for the explanation of intentionality and language use. In this respect, I also agree with van Dijk that one problem with taking a non-mentalist approach in discourse analysis is that the resulting model of explanation is incomplete and in fact, artificial. That is, according to van Dijk, cognitive notions always "come in through the backdoor" (p. 11) in the form of ideologies, purposes, knowledge, and appraisal systems, amongst many other mental constructs that are necessarily used by analysts (as in fact participants do as well) to explain how meaning is constructed in interaction. The problem, according to van Dijk, is that social meaning is not only social, but also mental, and in that sense it is artificial to try to separate discourse, cognition and culture as mutually exclusive processes or to try to avoid the mention of one of them in the analysis. As a result, I would suggest that a better strategy is to incorporate 'mind' and 'culture' into the analysis of talk in interaction by developing suitable methods that are able to account for them as constitutive elements of any attempt of theoretical explanation of how language is used by participants in interaction. Along these lines, an early attempt to operationalise a similar argument to account for mental and cultural processes in speech events is the ethnography of communication, that was an emergent perspective in anthropology around the 1970's.

The ethnography of communication approach, developed by Hymes and colleagues assumes that language use is the result of the development of communicative competence, which is a mental skill. Hymes shares with Chomsky the general idea that a cognitive interface is needed to explain language use, but in contrast to Chomsky's concept of linguistic competence (concerned only with the capacity to construct grammatically correct sentences), communicative competence incorporates the idea that

such sentences can only be considered correct if they are studied in context. As a result, for Hymes, an individual can be assessed to be communicatively competent when their utterances are not only grammatically correct but also adjusted to the cultural context in which rules of speaking are developed and used by members of a given speech community. Although Hymes's notion of communicative competence has proved to be a useful construct to investigate language use not only at a cognitive level, but also situated in a cultural context, Hymes's rules of speaking have been criticised for being too rigid and deterministic, thus not being able to account for individual language variation and agency.

In addition, although the five approaches summarised above deal with the issue of agency in different ways (e.g. either as culturally determined or individually governed), I would suggest that the issue of power as a related outcome of social positioning that comes with the pursuing of goals by agents is not the main focus in their research agenda. In this respect, the work of Foucault and Habermas, despite their different stance on this matter, is centrally concerned with the origin and management of power in society. On the one hand, Foucault proposes that power is the result of the pursuit of different agendas in institutions where academic disciplines create knowledge and discourses to account for different social phenomena. Given that knowledge is always embedded in power and that there is no knowledge without discourse, language is always bound up with power. Thus, discourses are thought by Foucault to be the product of the exercise of power that, in turn, determines the construction of the subject. That is, for Foucault, the use of different discourses affords different subject positions. Additionally, given the way discourses are constructed as intrinsically linked to power, for Foucault there is not an absolute objective truth but just contestable versions of it.

In contrast, Habermas argues that truth, as a rational agreement, is possible if it is considered to be the result of the achievement of shared understanding between participants in dialogue. In this respect, rationality is the result of the possibility of participants to make validity claims concerning comprehensibility, truth, rightness and truthfulness of what is at stake in a conversation. That is, every act of communication implies that participants can reach a consensus on the validity of these claims. In addition, for Habermas, genuine consensus only occurs in unconstrained dialogues where all speakers have equal access and in which only 'the force of the better argument prevails'. Consequently, deception, power and ideology can be prevented if participants commit themselves to follow the rules of argumentation that characterise these unconstrained dialogues that Habermas characterised as instances of what he called the 'ideal speech situation'.

Although both Foucault and Habermas have been very influential in the development of CDA, they have also been criticised in some respects. For instance, Foucault has been criticised for his extremist position in relation to the lack of existence of the subject prior to discourse (e.g. consciousness then is conceived as always decentred), and where personal agency is not possible as it is always imposed by the discourses in use. On the other hand, Habermas has been criticised for the normative character of his theory where agency is conceived in terms of procedural ethics, and where dialogue is only investigated in relation to its ideal conditions. Additionally, although both authors focus on the analysis of power in society, they were not interested in applying their methods to real conversations where power could be identified in interaction.

Nevertheless, I also would argue that for the purpose of my main study, I find Foucault's insistence on the conformation of subject positions as a process afforded by discourses to be a useful tool the investigation of situated identities in the literacy

practices I have documented. Likewise, although I am convinced by the criticisms addressed to Habermas in relation to the normative and ideal nature of dialogue (e.g. Linell, 1998; Taylor, 1991), I also find useful his remarks about the generation of shared understanding as a condition necessary for any dialogue to exist. Thus, I follow Habermas along these lines to investigate to what extent context can actually be shared (or not) by participants as a function of the establishment of common goals in the communicative events I examined.

Finally, looking for an approach that could allow me to investigate the possibility of partial shared understandings and the existence of multiple goals amongst participants, I discussed how IS is an approach that is interested in the investigation of human agency as a balance between cultural and individual determination. That is, on the one hand, IS is fundamentally interested in the role of culture in human communication that is consistent with the ethnography of communication approach. On the other hand, IS keeps an interest on the study of the rules and methods of participants, and agency from an insider's perspective, characteristic of ethnomethodology, CA, and DP. By doing this, IS has developed a set of methodological tools that are useful to investigate linguistic variation, communicative intentionality, asymmetry and power, hence incorporating as well the concern of CDA in relation to the analysis of power in social interaction.

In this respect, I consider IS to be currently the most comprehensive discursive analytic perspective both in theoretical and methodological terms. IS has not only incorporated the most useful attributes and theoretical concepts of other approaches, but it has been successful in integrating them coherently in a methodological proposal. This proposal mainly draws on ethnography and CA to provide an account of the overall ecology of communicative events being investigated, and to shed light on the mechanisms by

which participants construct their own categories while they manage conversations constituting such events. Additionally, the investigation of contextualising cues and the analysis of frames help to complete the picture of the 'why' and the 'how' of communicative competence and linguistic variation.

Consequently, I have used IS as the main discursive analytic approach for the data collection and analysis of results of the main study in this dissertation. In this respect, first I have used ethnography of communication to provide a rich description of the communicative situations and events in which pupils got engaged while constructing WebPages in a primary school in the UK. Second, I have carried out an analysis of their conversation in selected communicative events using CA, and more specifically, analysing the sequential organization of utterances, the joint construction of turns and accomplishment of goals by participants, and the interdependence between acts, events and situations (e.g. Linell, 1998, p. 8-9). Finally, I have also looked at the use of certain keywords in context (e.g. 'because', 'Victorians', 'rich and poor', etc.), as contextualising cues that make evident the shift of frames. This shift in frames indicated the different interpretations of participants about the type of activity in which they were involved, as well as the categories being negotiated in social interaction with regard to these frames.

In the next chapter, I will describe in detail the characteristics of the main study, and in particular how I used NVivo to organise my data in communicative situations, events and acts following the ethnography of communication. In Chapter 6, I will show how I used the literature review presented here, and specifically the ethnography of communication to investigate indexicality, cultural patterns, division of labour and collaboration in selected communicative events. In Chapters 8, 9 and 10, I will focus on the identification of categories constructed by participants concerning the interpretation

Chapter 4 Sociolinguistics and Discourse Analysis

of the activity in three different frames: design, History and group work. In general, the analysis of results presented in Chapters 6, 8, 9, and 10 represents a response to the problems of investigation pursued in this dissertation concerning the analysis of literacy practices, cultural models and agency in a way that is consistent with the theoretical framework developed in sociocultural theory informing this dissertation.

CHAPTER 5. CHARACTERISTICS OF MAIN STUDY

5.1 Design

The study presented here was carried out following an ethnographic perspective in communication (e.g. Gumperz & Hymes, 1986; Hymes, 1974; Saville-Troike, 2003), as it has been applied to educational scenarios (e.g. Maybin, 1987, 1996a), and a focus on the study of literacy practices (e.g. Gee, 1990; Heath, 1983; Street, 1997, 2000) that have emerged with the use of information and communication technologies (ICT).

The literacy practice that I investigated was the collaborative construction of WebPages in History by a class of Year-4 children in a primary school in Milton Keynes, UK. There were three main objectives in this project. The first one was to investigate how children learned about the use of ICT tools to construct new types of electronic documents. In particular, I was interested in finding out how children could learn to construct WebPages by using a specific computer programme that I had explored during Pilot Study 2: SiteCentral (Cochard et al., 1999). The second objective was to investigate how children could learn about a given curricular subject within this activity. In this case, I was particularly interested in looking at the ways children learned about the Victorians in History. The third objective was to investigate how knowledge was constructed in social interaction through the use of language in this particular literacy practice.

In order to start the project, I was put in contact with a primary school teacher (Miss Clementine), who had participated previously in a programme of “talking lessons” (Dawes et al., 2000). In that programme, children were taught to follow a set of “Thinking Together Skills” (TTS hereafter) with the aim to teach students in several primary schools in Milton Keynes, UK, how to collaborate more effectively by talking

to each other (e.g. Mercer & Wegerif, 2003). The TTS consisted of a set of rules encouraging the children to provide reasons for actions, to ask for opinions to the others, and to agree as a group before doing something, as discussed in sections 3.2.4 and 3.3.1 in this dissertation. This intervention programme had been implemented previously in Miss Clementine's school (Brownhill School), where she had participated using the TTS with a class of students in the "literacy hour", and focusing on the subjects of Maths and Science.

Thus, when that project had concluded in Brownhill School, I asked Miss Clementine if she wanted to participate in another programme ("Multiliteracies and the Victorians"; M&V hereafter) in order to teach children how to construct WebPages in History, as described above. She accepted my proposal, and given her recent involvement with the use of TTS in classrooms, she explicitly asked to continue using them in the new project, and I accepted. The programme started in January 2002, with a class of children in Year 4 that were new to the TTS intervention programme and that had never constructed a WebPage before. Miss Clementine also did not have experience with the construction of WebPages, but she was willing to learn about it as it was part of the compulsory tasks set up in the National Curriculum. Prior to the start of the M&V project, Miss Clementine and I met several times since November 2001 to discuss about the ways to implement the intervention programme in a way that would suit better the interest of both of us, as a teacher and researcher, respectively. In total, the M&V project comprised 11 1-hour sessions: 8 weekly sessions, and 3 daily sessions during the last week of the project. The activities carried out in all the sessions were agreed beforehand as well as the content of "Activity Cards" in order to suit the needs for each session. We aimed to achieve the goal of having two group WebSites constructed by the end of the project: one about the life of children in Victorian times, and the other one about inventions and famous characters in Victorian times.

5.2 Participants

23 Year-4 students, 9-10 years old, working in groups of 3, were organized by the teacher using the criteria of mixed ability and mixed gender, on my request. Each group of children worked in one computer assigned to them in an ICT room in Brownhill School. The teacher was of course one of the main participants leading the activities through plenary sessions, providing 'scaffolding' in small groups, and giving general advice about the different tasks that children were involved in. In this sense, the teacher addressed continually issues of multimodal design, historical content, and collaboration skills. She usually started with a whole class event with all the children sitting in the carpet where she would explain the goals of the session, and very often she would read aloud the first page of the Activity Card that was going to be used in that session. After this, each group of children would go to their computer, open the programme and the file where they were working, and following the instructions in the activity card, they would continue constructing their WebPage. Miss Clementine eventually would stop the group work and ask the children to come back to the carpet, or to contribute from their place about the advances, difficulties, and discoveries about the construction of their WebPages, and their use of the TTS. In many occasions, she would ask the group to look at one of the computers to teach them some affordances of software linked to the construction of their WebPages. Then she would ask the children to go back to their places and to continue working in their WebPages as a group. Very often as well, the teacher would go around the room checking the progress of students and reminding them about the use of the TTS.

I was also a participant observer during all the lessons, filming and audio recording all the activities and taking field notes of relevant events, but also providing mostly technical assistance about the use of software to create the WebPages, and helping the

children in small groups when they required it. In addition, a technical officer helped me with the handling and setting up of the equipment in 7 of the sessions, who eventually participated naturally when the children approached to him to ask for help. Finally, we had a couple of visits from members of the Open University interested in the project that were observing 3 of these lessons.

5.3 Tools

Following a sociocultural perspective, as discussed in Chapters 2 and 3 of this dissertation, the main tools used by children and teacher to construct WebPages in the M&V project were:

- **Projects about the Victorians:** In order to optimise the time spent in the construction of their WebPages, children brought to the sessions historical projects comprising literature reviews about the Victorians. Using books and images taken from public libraries and at the school, they constructed and developed these projects in advance to the sessions.
- **Concept maps:** Children elaborated a concept map about the Victorians in one of the sessions of the project that was used to inform the structure of the second set of WebPages they constructed.
- **Books:** The ICT classroom where the study took place had a small library about the Victorians that the teacher had prepared before hand in case the children needed more information about the topics they were developing. Children used books when they were needed to look up for specific information such as a historical date, names, or places they wanted to mention in their WebPages.
- **Activity Cards:** I prepared 5 activity cards that were used by the children in small groups in order to help them to understand how to use software to construct their

WebPages. They also guided their activity within the small group towards the completion of certain goals such as the recognition of a structure of a WebPage (e.g. in a sample WebPage created beforehand), the discussion of historical content, features of design, and the monitoring of the general progress of the WebPage, including some tasks of peer revision.

- Software “SiteCentral” (Cochard et al., 1999): A user-friendly programme to create WebPages by dragging and dropping elements from tabs organized in a menu. Children chose backgrounds, pictures, sounds, text, hyperlinks, etc., and placed them into the screen to produce their WebPages.
- Software “eMindMaps” (MindJET, 1999): Software used in a couple of lessons to produce an electronic version of the concept map of the Victorians to inform the design of their WebPages.
- Victorian clipart library: As part of the activity, and in accordance to the idea of the different affordances of multimodal electronic documents, it was important to provide the children with the visual resources related to the Victorians in order to be used in their WebPages. A Victorian clipart library was created and installed as a “gallery” in one of the tabs, based on a special school clipart CD-ROM (Cornforth & Harper, 2001), and on pictures that were taken from the Internet in sites such as the British Museum, the National Portrait Gallery, etc.
- Design principles for constructing WebPages: I prepared a set of principles informing the children about the issues that should be taken into account in terms of visibility, aesthetic Victorian standards, general visual layout of WebPages, and adequate use of pictures, fonts, backgrounds, and colours in relation to the topics they were developing. (See Appendix 1).

- **Thinking Together Skills (TTS):** A set of ground rules that the children were asked to follow to talk to each other in order to think together and collaborate more effectively in small groups. These rules were devised by the teacher informed by her previous participation in a research project where the use of these skills was implemented in several areas of the curriculum (e.g. Mercer & Wegerif, 2003; Wegerif & Mercer, 2000). This is an example of the rules that the teacher asked the students to follow:

1. Ask everyone's opinion
2. Give a reason
3. Final decision is agreed by everyone
4. Don't speak while someone else is & listen
5. Be prepared to change your opinion

Similar versions of the previous rules were reminded to students at the beginning of each session. Also, the teacher used 'bubble dialogues' that she would place next to the whiteboard in front of the class, with actual utterances that children were asked to say in accordance to the TTS described above. The bubble dialogues included utterances such as:

1. What do you think?
 2. Why do you think that?
 3. I think this because
 4. Do we / you agree
 5. What's your opinion?
 6. I don't agree because
- **Language:** The teacher used language to inform the students about the use of all the other tools mentioned before in this section as part of different communicative events that took place such as plenary sessions and the provision of assistance in

small groups. Also, students talked to each other in order to get agreements and decide what to do in small groups about the web site.

5.4 Data Collected

As with any other project informed by an ethnographic methodological approach, the data collected comes from several sources:

- 37 WebPages constructed by the children in 2 related historical themes (published in <http://www.geocities.com/jmferc>): 'How life was for children in Victorian times' (17), and Victorian famous characters and inventions (20).
- Whole class and small groups' activities: In addition to the whole class plenary sessions, to be able to analyse how different categories were negotiated using language in social interaction, 2 focus groups were video recorded (20+ hours of recordings).
- Focus group's ScreenCam files (Lotus, 1998) per session: This software allowed me to record all the activities that children carried out in the screen of the computer, and they were analysed in conjunction to the recording of the children working around the computer in order to make sense of the discourse of the participants in relation to the task.
- Interviews with all children in groups and teacher (5+ hours of recordings, 80 pages of transcripts, approx.): Immediately after the sessions finished I carried out semi-structured interviews, lasting approximately 20-30 minutes each, with the teacher and the students. The children were interviewed in the same small groups as they were working throughout the project in front of a computer with their WebPages on the screen, discussing issues of design, historical concepts, group work, and use of tools. The interviews with the children were video recorded, so that the verbal

references to their own work in the screen could be understood in relation to this visual context. The teacher was interviewed in relation to similar issues asked to the children but without using a computer. Also, I asked about her impressions of the project, the curricular goals achieved, and her conceptions about new literacy practices, texts, multimodality, and class management. The interview with the teacher was audio recorded.

- Ethnographic notes were elaborated after every session with the fieldnotes collected. The 11 fieldnotes were elaborated following the guidelines presented by Emerson, Fretz and Shaw (1995), and were also reformulated and enriched with the analysis of the video recording of the sessions and the identification of different communicative events that took place during the project in plenaries and small-group activities.
- Group responses to activity cards: As part of the use of the activity cards, children were often asked to write down information in them in relation to their appropriation of the design principles for the construction of WebPages. There were 35 questions distributed in 5 activity cards (280 answers in total), asking the children to provide information about issues of planning, construction and revision of their WebPages, filling the gaps in sentences such as: *"the colours of the font and the background must be..."*, *"the first image we use(d) is... because"*, or *"we think our WebPage/your WebPage is..."*, or responding in checklists to questions such as: *"Does the background look Victorian?"*, *"Is the information in the texts related to the title?"*, *"Are the links well organised in the WebPage?"*, or *"We think you can improve your WebPage by..."*.
- Paper and electronic concept maps: Children constructed in groups 8 cardboard concept maps, and 8 electronic concept maps. There were 16 branches per concept map in average, and 288 concepts organised in different branches in total.

- Other sources: E-mails with teacher, thank-you-cards, etc.⁴

5.5 Results

By using the tapes recorded during the project of the whole class plenary sessions and the two focus groups, and also by using the corresponding ScreenCam files for each of the focus groups and the information collected and registered in ethnographic notes, the 20+ hours of video recording were codified in NVivo (QSR International, 2002) in terms of “communicative events” as units of analysis. For the purpose of this study I used Saville-Troike’s (2003) definition of communicative event to define my units of analysis, by particularly focusing on the nature of the explicit goal that participants pursued within each event. In other words, by operationalising the existence of a “same general purpose of communication, the same general topic, and involving the same participants” in terms of explicit goals to be achieved in each event, I found the following:

- 41 different types of communicative events identified and coded. A node was created in NVivo to codify the occurrence of each event. For example: “Typing captions” was one of the types of communicative events identified that was defined as “This node codifies instances where children write captions to images”.
- 591 communicative events were coded in total. For instance, in the example provided above, “Typing captions”, this event was identified in 5 occasions in the recording of the focus groups. Communicative events were mostly defined by the actions of the participants as single-goal processes. However, in many cases several goals were pursued at the same time, a fact widely recognised in sociocultural theory

⁴ Also, I wanted to take copies of some Victorian projects elaborated by the children, but the teacher did not allow me to do it. That is, when I started the interviews with the children, I had asked them to bring their projects to the ICT room, but then I learned that in a late move the teacher did not let them do this. When I heard this from the first group I interviewed, I made a connection with some comments that the

(e.g. Wertsch, 1998). Thus, types of events were mostly mutually exclusive, although multiple coding was allowed to be able to account for the possibility of having a communicative event serving several purposes in parallel or transitions between goals, such as writing a draft in paper and typing a caption simultaneously; or a plenary where the teacher addressed issues of design that were intertwined with the explanation about the use of certain commands in the software (e.g. the node of “plenary design” overlaps with “plenary software” in some moments).

5.6 Analytical Procedure

The results described in the previous section were analysed in two further ways, in order to answer two different types of research questions. The first question is **“How children constructed categories of meaning using language in social interaction?”** In this respect, drawing on the literature review I presented in Chapter 4 about sociolinguistics and discourse analysis, and using the ethnography of communication as a starting point, in the next chapter I analyse the relationship between language and context in terms of deixis, and intercontextual references. Also, I show how language was used by participants in accordance to patterns, which can be characterised in cultural terms. In addition, I illustrate how the use of language in social interaction usually involved a communicative division of labour as well as a degree of collaboration for the achievement of goals. Finally, I discuss the implications of these analyses for the concept of exploratory talk, as one of the main outcomes that the teacher was hoping to see enacted while the pupils were constructing their WebPages. In general, I carry out these analyses in terms of the different communicative acts which constituted the communicative events I found during the project. That is, following the ethnography of communication distinction between communicative acts, events, and situations, in order

teacher had made in previous sessions about that these projects (perhaps unlike the other tools used) were

to answer the research question I described above, in the next chapter I focus on the relationship between communicative events and communicative acts.

In contrast, for answering the second research question of **“What categories of meaning were constructed by children using language in social interaction, according to the activity frames of a) design, b) historical content, and c) group work?”**, I focus on the analysis of the relationship between communicative events and situations. Using the concept of frame proposed by Goffman (1974), which is according to Wertsch (1985b), analogous to the concept of activity from a sociocultural perspective, I analyse how the activity of constructing the WebPages was being framed by participants as a design activity, as a demonstration of historical knowledge, and/or as a group work situation. Given that frames can be conceptualised as layers of meaning, as I discussed in Chapter 4, frames operate simultaneously in a given situation, and in that respect, I have only separated these three particular frames for analytical purposes, because of the main research interest of understanding the construction of WebPages as a practice where different literacies are being developed by participants. Thus, by discussing the different categories constructed by participants in social interaction according to these particular types of activity, in Chapters 8, 9, and 10, I provide an account of some of the literacies being developed by the pupils. In addition, in order to clarify how I carried out the analyses of these three different frames, in Chapter 7, I present the particular analytical framework followed in this respect. Finally, in Chapter 11, I discuss how the different categories identified in Chapters 8, 9, and 10 were interrelated as part of the practice of constructing WebPages.

only theirs. Although I resented it, this didn't cause any friction between us.

CHAPTER 6. LITERACY AND EXPLORATORY TALK: CONTEXT, PATTERNS, DIVISION OF LABOUR, AND COLLABORATION IN COMMUNICATIVE EVENTS⁵

6.1 Rationale for the Analysis

Language has played a key role in the research in literacy and education. Issues such as which types of languages should be taught or be the medium of education, the relationship between language and learning, and the use of language to construct knowledge and identities are amongst the highest concerns of educational debate (Lillis, 2003). In this respect, the use of language has been studied widely in relation to the way knowledge is constructed in social interaction (e.g. Cowie & van der Aalsvort, 2000). In addition, the use of language has been particularly analysed in relation to the role of ICT in collaborative activities (e.g. Littleton & Light, 1999) and also with a specific focus on the “exploratory talk” framework (Wegerif & Scrimshaw, 1997).

Similarly, in relation to literacy and exploratory talk, some studies have been carried out already, focusing on the study of talk using small case studies which illustrate the use of exploratory talk when it is found in literacy related activities (e.g. Mercer, Fernández, Dawes, Wegerif, & Sams, 2003; Mercer et al., in press). However, given the apparent variations in the use of exploratory talk found in other studies (as discussed in Chapter 3 of this dissertation), and given my interest in developing a method that could allow me to look at natural occurrences of language use such as everyday classroom literacy practices, I searched for an appropriate methodological framework to carry out a more descriptive and inclusive analysis.

⁵ This chapter is based on a previous version of a paper presented in the EARLI Conference, 2003. See Fernandez (2003b)

Therefore, I looked for a framework that could allow me to map not only the occurrence and appropriation of exploratory talk by children in primary schools, but also to understand other ways of using language in which meaning is constructed in small groups. In addition, given my focus on the use of tools and cultural mediation, such framework should also be still compatible with a sociocultural perspective as a general theoretical framework for my research. Finally, in terms of data collection, it was important to design a study that could allow me to collect data reflecting the emergence of “new” literacy practices linked to the use of ICT as discussed in Chapter 2 of this dissertation. Taking all these issues into account, I decided to look at the collaborative construction of WebPages in History by primary school children, and to use the ethnography of communication approach to design, collect, and analyse the data emerging from this study as discussed in sections 4.1.5 and 5.6.

In this chapter, 3 different types of communicative events are analysed in order to find out about the relationships between events and acts in the collaborative construction of WebPages in History in general, and the presence of the ground rules of exploratory talk in particular in the dialogues of children working in small groups. The three types of events selected for this purpose are:

- Choosing and typing paragraphs (42 events)
- Choosing pictures (11 events)
- Choosing backgrounds (11 events)

These events were selected as representative instances of the work of small groups in relation to three different semiotic modes (written language, pictures, and colour templates), and as an illustration of the affordances of the construction of multimodal electronic documents in relation to the design and realisation of meaning in History as a curricular area. Also, the events represent similar goals in relation to the construction of

the WebPage. That is, the events are about the accomplishment of a general purpose of adding and constructing elements towards the completion of a WebPage about the Victorians.

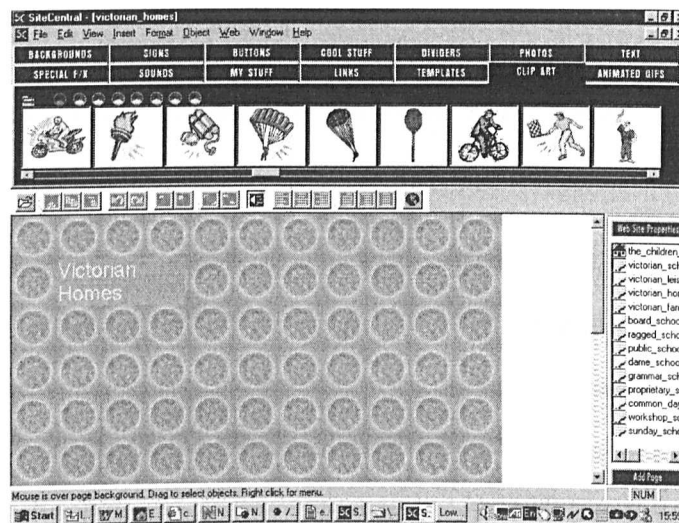
6.2 Analysis

The 64 communicative events for this chapter were analysed in terms of the components of speech constituting them. Hymes (1972a) proposed that in order to understand how a communicative event is structured it is necessary to identify its components and the relationships amongst these components, which in turn constitute the rules of speaking of such events. (For a further description of components of speech and rules of speaking, see section 4.1.5 in this dissertation).

Next, I will present three sequences where I will be using some of Hymes's SPEAKING research heuristic, along with some other concepts that I will describe in turn, to analyse a) the role of context, b) the existence of patterns and a division of labour, and c) the intrinsic collaborative nature of the construction of knowledge as part of the use of language by primary school children in the UK while constructing WebPages in small groups.

6.2.1 Role of Context

In this section I shall be focussing on the components of “setting” and “scene”, S in Hymes's heuristic tool to illustrate the role of context in a communicative event where students are choosing a picture for their WebSite. Also I shall be using some concepts of context as proposed by Mercer (2000), Maybin (1996a), and Linell (1998) to inform and compare the analysis of the event presented next. In the following event, students Claire, Kieran and Zahir are choosing a picture for their WebPage about “Victorian Homes”. In a previous session they looked at another WebPage about “Victorian Schools” to identify some design features present on it such as visibility, relation to



Also, the teacher has just spoken to them reminding that they should carry out this activity working as a group:

1. Teacher: Up to you, you've got to decide as a group. (Teacher leaves).
2. Claire: Do you like that one? (Pointing).
3. Zahir: Shall we just see each of them first?
4. (Children start to point to the screen, to the clipart tab with the options of pictures).
5. Kieran: Ah, cool!

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6. Zahir: A bat. (Pointing).
7. Kieran: Yeah, a bat.
8. Claire: I think we just need something to go with homes, don't we?
9. Kieran: Huuh!!!! Stop, stop, stop! (the scrolling of the pictures). Homes got a pair of trousers, right? (pointing to a picture of trousers)
10. Claire: Nooo...
11. Zahir: Shut up Kieran...
12. Claire: Oh no, he was OK.
13. (Kieran and Zahir laugh).
14. Zahir: Baseball, racquet. (Pointing).
15. Kieran: What, you want to see your mum with a hit over it?
16. Zahir: Shut up...
17. Claire: Homes... what can we do?
18. Kieran: Playing guitar? No, that's not indoors, is it? (Pointing to a picture of somebody playing a guitar in a park).
19. (Zahir laughs).
20. Kieran: I'm just saying.
21. Zahir: We're indoors now.
22. Claire: Come on, let's just see what that is.
23. Kieran: Oh, it's like a bear. (Pointing)
24. Zahir: Let's see before
25. Kieran: Yeah! that could be an old man. (Pointing).
26. Kieran: Look, action! Your mum and dad having a film. (Pointing to a picture of a clapper board).
27. Zahir: Shut up...
28. Kieran: Like a film, like action. (Clicking with both hands like when closing this artefact).

29. Claire: Ahh! cool! // that's a Victorian there... that's what it is. (Drags and drops in the background the picture of a person, dressed with old traditional clothes).
30. Zahir: These are like Victorians. (Pointing to a picture of a group of people dressed in modern clothes).
31. Claire: These aren't. Victorians are like posh people.
32. Zahir: Yeah, that's you Kieran. You're posh.
33. Claire: And now we need a ragged person.

Hymes (1972a) defined setting as the time and place of a speech act and, in general, to the physical circumstances (p. 60). In this respect, we can see how the physical aspect of the activity is invoked in the utterances of the children, such as when they nominate a given picture to be used on their WebSite (see utterances 2, 6, 9, 14, 18, 25, 26, 29, 30; e.g. 25. Kieran: *"Yeah! that could be an old man."* (pointing)) or when they refer to features or actions related to the software (e.g. 9. Kieran: *"Huuh!!!! Stop, stop, stop!"* (the scrolling of the pictures). *"Homes got a pair of trousers, right?"* (pointing to a picture of trousers)). This is what in linguistics is known as indexicality (or deixis), a term related to "the features of language which refer directly to characteristics of the situation within which an utterance takes place" (Crystal, 1991, p. 174). However, language is not only indexical (or deictic) in relation to the physical features of the situation. In this respect, Hymes's definition of scene, designates the "psychological setting or the cultural definition of an occasion as a certain type of scene". Hymes provides the example of a case where the same persons in the same setting "may redefine their interaction as a changed type of scene, say from formal to informal, serious to festive, or the like" (Hymes, 1972a, p. 60). In this respect, we can also see in the transcript how the scene can be labelled as fairly informal, as the children nominate several pictures in a task that is very open in relation to the options to find a suitable

picture to represent a Victorian home (8. *Claire*: “*I think we just need something to go with homes, don’t we?*”) in a playful way (13. (*Kieran and Zahir laugh*)).

Yet, the situation is also defined by previous encounters of these children working around the computer in small groups, pursuing a common goal, and where participants assume different positions that have more authority than others within the activity. Thus, we can see how the scene becomes ‘authoritarian’ at some points when Kieran’s intervention in utterances 9, 15, and 26, are followed by Zahir’s rejection in terms of: “*shut up*”. On the light of the “exploratory talk” framework, we could say that Zahir is not following the TTS despite of Claire’s admonition in turn 12 (*Claire*: “*Oh no, he was OK.*”) and the teacher’s explicit reminder to work as a group in turn 1 (*Teacher*: “*Up to you, you’ve got to decide as a group.*”). Nevertheless, despite of the apparent lack of ‘effective explicit provision of reasons’ in certain moments, the group is able to choose an appropriate picture of a Victorian person by invoking features of the Victorians such as “*posh*” and “*ragged*” in utterances 31, 32, and 33. This is related to the essentially collaborative nature of the construction of meaning, as something that does not belongs to a particular individual, but rather as something that is carried out through social interaction, ‘between utterances’. Thus, linked to this collaborative construction of meaning, another dimension to be taken into account as part of the context of this event, is the intercontextuality (Voloshinov, 1986) of the reasons provided by the children to nominate, support, and reject the different pictures considered. In particular, Kieran’s suggestions in utterances such as 9. *Kieran*: “*(...). Homes got a pair of trousers, right?*”, 18. *Kieran*: “*Playing guitar? No, that’s not indoors, is it?*”, and 26. *Kieran*: “*Look, action! Your mum and dad having a film.*”, invoke situations and participants that are not present in the actual setting of this event but are brought into the conversation as a matter of support for his choices based on examples of everyday activities that are related to homes (as the section they are working on of “Victorian

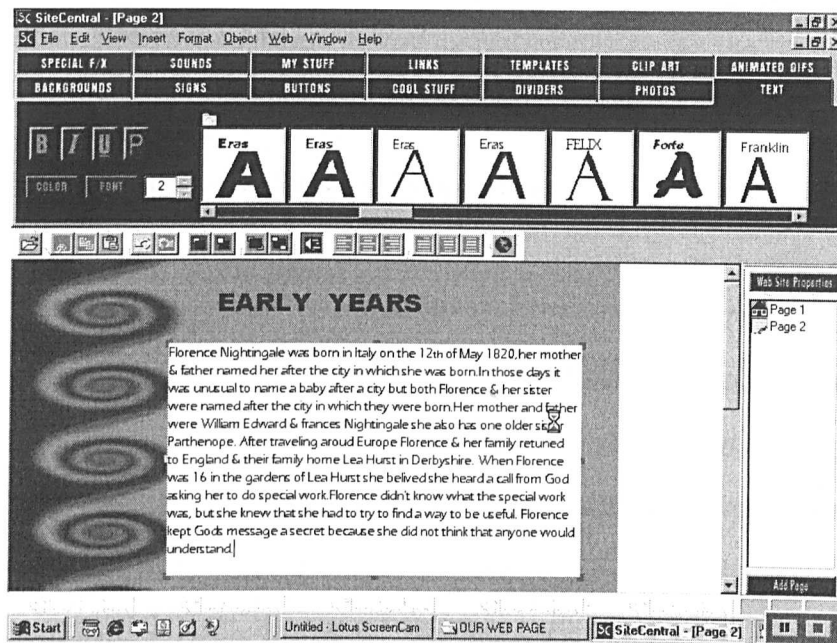
Homes”), and to habitants of these homes such as “mum” and “dad”. This is what authors such as Linell (1998) and Maybin (1996a) have called intertextuality or intercontextuality in relation to the fact that conversations are not only framed by the immediate context of the situation but also by invoking what has been said and done or what may happen in upcoming encounters. In this respect, the ground rules of exploratory talk are just one of the factors (Mercer, 2000, p. 28) of a matrix of different contexts (or dimensions of context) shaping a given piece of discourse (Linell, 1998, p. 182). Finally, it is interesting to note how this intercontextuality is even applied to the explicit definition of identities within the conversation, such as when Zahir calls Kieran a “posh” person (turn 32) in the context of Victorians being posh people. A fact that illustrates how in any piece of discourse participants not only construct knowledge but also subject positions or identities situated as part of the setting and scene of the event.

Finally, the material affordances of each semiotic mode, as deictically present in the discourse, made a difference in the way each of these modes were invoked in the utterances of the participants constituting different communicative events. That is, children invoked different features of pictures, backgrounds, and words that constituted patterns of communication. These patterns, along with the purpose of the group in each event, helped me to identify the different communicative events as addressing the construction of different parts of the WebPage using different semiotic resources. In the next section, I will look in more detail to the notion of pattern by addressing the components of Act sequences and Genres, A and G respectively in Hymes's SPEAKING heuristic tool for components of communicative events.

6.2.2 The Existence of Patterns and Division of Labour in Communicative Events

In this section I shall use Bakhtin's (1986a) concept of genre and Hymes's discussion of the relationship between act sequences (A) and genres (G) to look at the existence of a pattern, which some of its features are determined culturally based on the previous history of occurrence of the same type of events. Also, I shall discuss how participants and goals are intertwined and subject to a structure of division of labour, and the development of roles inherent to any communicative event. For this purpose, I will also draw on the notion of communicative division of labour proposed by Linell (e.g. Linell, 1998; Linell & Marková, 1993) to analyse the distribution of tasks amongst participants in this event.

In the next sequence, Annie, Nancy and Jake are engaged in the communicative event of "choosing and typing paragraphs", defined as "the action of typing either something that they have previously done (e.g. a paragraph from their Victorian project), or something they are composing at that very moment, as an original creation". In the previous session they started working on a WebPage about Florence Nightingale as a famous Victorian Character. They wrote a small summary of her life describing why she became famous. In this session, the last one of the project, they have decided to add a second page to their WebSite about her early years. Thus, they have chosen a background of fire swirls in orange, and have decided to type the title "EARLY YEARS" at the top of the page. They have also inserted a text box by using the font type "Eras" and are about to start typing on it.

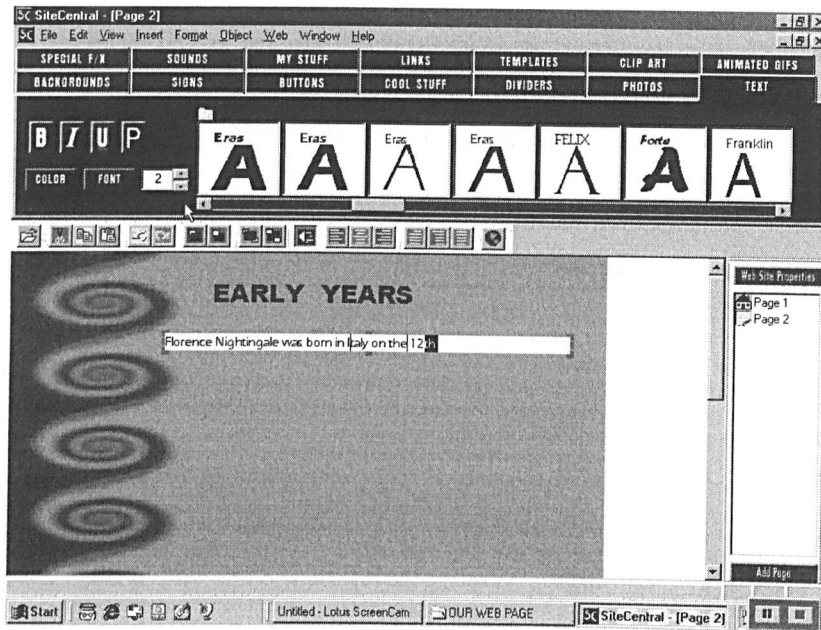


Most of the information that they used to construct this WebPage and the previous one has come from a historical project that Annie made about Florence Nightingale, comprising a literature review she did in the public library and at the school, plus some pictures and maps. In the next transcript they are about to start to type the first paragraph of this second WebPage:

Transcript 6.2. Florence Nightingale's Early Years

1. (Jake has dragged and dropped a text box with the font type "Eras")
2. Annie: What sort of things shall we write? Shall we write when she was born?
3. Jake: We've done that.
4. Annie: Yeah, but we haven't done it at her earliest. Let's just copy down the text (whispering).
5. Jake: Yeah.
6. Annie: OK. So...
7. Nancy: Yeah, but we're gonna swap over for typing.
8. Annie: Mh, hum. Florence Nightingale.

9. Jake: Wait.
10. Annie: It's all capital, though. It's all capital.
11. Jake: Oh, you never took cap locks.
12. Annie: I wasn't allowed to touch the keyboard, was I?
13. Nancy: Can we make the font a bit bigger?
14. Annie: Yeah, we will. After we'll make the font bigger.
15. (Annie shows her project to Jake who is copying and typing in silence).
16. Annie: Can we do a sentence at a time each?
17. (Jake continues copying from the project, with some spelling help from Nancy and Annie).
18. Nancy: Oh no, no, no, no. Look. we're going to type the whole paragraph again: "Florence Nightingale was born in Italy on the 12th of May".
19. Annie: We are not. Look. We've done just that. (Pointing to the project).
20. Nancy: Yes but we've done that as well. (Pointing to the project).
21. Annie: Yes, cause this is early life.
22. (Jake continues copying).
23. Nancy: Can I type the next sentence?
24. Annie: Yeah.
25. Jake: No.
26. Annie: You'll go up to the comma, cause the comma is quite far away, and then Nancy will go up to the full stop, and I'll go up to the bla, bla, bla....
27. Jake: We need to do this TH quite small though.
28. Annie: Don't worry. We will. Just do it normal for now. I know how to work it out.
29. Jake: Unless we do... [(Annie holds the mouse, highlights the TH in the paragraph and changes the font size)]



30. Teacher: [(Voice). Right guys, can you stop for a minute? Claire has asked if somebody else has seen a book about Alexander Graham Bell. Thank you.
31. Nancy: Hurry up Annie.
32. Annie: It's for Jake.
33. Nancy: I don't agree with that. I liked it the way it was [the font size].
34. Annie: Yeah. Now it's smaller like you have.
35. (Jake starts typing).
36. Annie: Wait Jake.
37. Jake: What are you doing?
38. (Annie changing the font size back to the way it was).
39. Nancy: Cause the font would've stayed smaller like that. (Pointing to the screen).
40. (Jake typing).
41. Nancy: You've done only...
42. Annie: ...1820. (Reading from the screen). OK, shall we swap?
43. Jake: This is not the full stop.

44. Annie: Yeah, but you have done a very big sentence. Very big sentence you've done.

Although there were some variations in the way paragraphs were typed as part of the project, there is also a common pattern or sequence of communicative acts, emerging from the 42 communicative events of this type analysed, as it can be observed in this transcript as well. Thus, the pattern of communicative acts observed in these events was:

- I. *A text box with a particular font (usually a Victorian one) is dragged and dropped in the background (1):* In transcript 6.2., we can see that in turn 1, the first thing children need to do before starting to type is to have a text box to do so, and consequently Jake has inserted an "Eras" text box to start to type this paragraph.
- II. *Typing. Usually parts of the text of the paragraph were mediated by the use of books, historical projects, concept maps, or drafts written on paper or a small white board (2-8):* In transcript 2, it is possible to see how in turn 4, Annie whispers to Nancy and Jake: "Let's just copy down the text", after asking them in turn 2: "What sort of things shall we write? Shall we write when she was born?"
- III. *Typing could be carried out in silence, although spelling aloud was also common (9-26):* Jake types in silence copying from Annie's project, as in turns 17 and 22. Nevertheless, Jake is interrupted in several moments to clarify the spelling of some words recently typed or as I will show in the next communicative act, to change the features of the font.
- IV. *Change of features of the font such as adjusting size and changing colours (27-44):*
In turn 27, Jake indicates that it is necessary to change the size of the TH in Florence's birthday, the "12th of May" (27. Jake: "We need to do this TH quite small though."). In reply, Annie asks Jake to continue typing with the font size as he has been doing it and to change it later. However, in turn 29 she changes her mind and starts to change

the font size by holding the mouse, highlighting the letters and applying the new font size, while the voice of the teacher in the background asks for a book of Alexander Graham Bell for Claire. Finally, in turn 38, Annie changes the font size to the one it was previously, and Nancy explains this action to Jake in turn 39: Nancy: "Cause the font would've stayed smaller like that." (Pointing to the screen).

- V. *A general structure for the writing is followed (45-49)*: The teacher had asked the students to write the introductory paragraph of their WebPages by thinking on responding to the questions "what", "who", "where", and "when", as a heuristic to include the most important information for the reader when introducing a Victorian character or invention in their WebPages. Although the mediation of this heuristic was not made explicit in the transcript presented previously, minutes later in the same session when they had finished to type half of the paragraph, Annie asked Claire and Jake:

45. Annie: We've done it // But we haven't finished it. (Annie typing). (5 sec.).
Right, shall we write? We have said where she was born and then when she was born, we need to say who she is, so...
46. Jake: Florence Nightingale! We've already got that from our title!
47. Annie: Oh, good, but, don't we need to say that her mother and father named her after the town where she was born?
48. Nancy: Yeah, her mother and father named her after the town where she was born in.
49. (Nancy extends her hand to grab the mouse on the other side of the table where Jake is seating).

In the list of components of communicative events, Hymes described that "the message form and message content are central to the communicative act and the focus of its "syntactic structure"", and that "they are also tightly interdependent" (Hymes, 1972a), p. 60). In the transcript presented above, the form and content of the message are part of

an event that is very much a procedural task where children are advancing in the construction of their WebPage. Also, the topic of each utterance as part of the message content is useful to identify the different communicative acts present in this communicative event going from inserting a text box, to typing, changing the font size and verifying the structure of the introductory paragraph. Thus, we could say that this sequence of acts is, on the one hand, shaped by the affordances of the software (e.g. it is not possible to start typing before inserting a text box, and not possible to change the font size if something has not been typed before). Nevertheless, on the other hand, there is also a cultural determination of this communicative event as in the history of the activities carried out during the project, children were asked by the teacher to follow a given structure to construct an introductory paragraph (e.g. by including information corresponding to the questions “what”, “where”, “who”, “when”). The writing structure of the introductory paragraph can be conceptualised as a genre amongst the writing of other types of paragraphs. In this respect, the act sequence is determined as a cultural pattern given in part to the fact that it is intertwined with the existence of a writing genre that shapes utterances accordingly to meet both the achievement of typing a paragraph that is required for advancing on their WebPage, and doing it by covering the requisites of the introductory paragraph genre as presented by the teacher.

Finally, Hymes (1972a) proposes that the relations between genres and act sequences is complex, as “genres often coincide with speech events, but must be treated as analytically independent of them” as “they may occur in (or as) different events” (p. 65). In relation to the communicative event of “choosing and typing paragraphs”, the complexity of this relationship can be observed, for instance, in events where utterances varied in length and number in each communicative act, where a communicative act is repeated or omitted, or moreover, where children did not seem to follow the structure of the introductory paragraph as required by the teacher. In these cases the relationship

between act sequences and genres has a higher degree of autonomy in respect to a cultural determination of the communicative acts for the shaping of utterances. In relation to this issue, Bakhtin proposes a distinction between “primary speech genres” and “secondary speech genres”, the former ones being linked to the use of language in all its spoken, everyday, transinstitutional variety, and the latter ones linked to an institutional setting (Bakhtin, 1986b, p. 61-62). For Bakhtin then, the construction of an utterance is a site of struggle where genres embodying centripetal and centrifugal forces come together to create meaning (Bakhtin, 1981, p. 272-273). Therefore, Annie, Nancy and Jake construct each utterance as a result of their own intentionality and the requirements of the task and of the teacher coming together as different forces shaping the dialogue.

Next, I would like to show how the transcript not only provides material for mapping the different act sequences followed by the participants, but also to illustrate another feature present in conversations: the existence of a division of labour in terms of communication and the roles assumed by participants in the task.

The division of labour as a specific mode of cooperation wherein different tasks are assigned to different people is a key concept in sociocultural theory as informed by a Marxist perspective that was followed by key figures in this area such as Vygotsky (1987) and Voloshinov (1986). The concept of division of labour in Marxism has been traditionally interpreted from an institutional perspective, in a ‘macro’ level (e.g. see Marx, 1999). However, as with other social concepts, division of labour can also be seen as happening in small-group interaction in a ‘micro’ level, as part of a communicative event. Authors such as Linell and Marková (1993) have stated that communicative events are collectively accomplished with an asymmetry of participation. Therefore “actions also generate an asymmetric distribution of epistemic

and practical responsibilities” (Linell, 1998, p. 221). The transcript 6.2 presented here shows in utterances such as 7. Nancy: *“Yeah, but we’re gonna swap over for typing.”*, 12. Annie: *“I wasn’t allowed to touch the keyboard, was I?”*, 16. Annie: *“can we do a sentence at a time each?”*, and 26. Annie: *“You’ll go up to the comma, cause the comma is quite far away, and then Nancy will go up to the full stop, and I’ll go up to the bla, bla, bla....”* some explicit terms in which this division of labour is realised, usually linked to the manipulation of objects: a) sitting on the chair next to the keyboard to type; b) being in charge of the keyboard, or mouse, or historical project; but also defining and distributing tasks: e.g. doing a sentence each going “up to the comma”. Also, these utterances invoke some of the features of exploratory talk such as taking turns for typing each sentence. Nevertheless, division of labour can also be implicitly assumed or established or non-verbally carried out, as when Annie provides assistance to change the font size while Jake is typing the paragraph, in turns 29 and 38. According to Linell, division of labour is the norm rather than the exception given the intrinsic asymmetric nature of participants who positions them in roles of complementarity rather than symmetry (Linell, 1998, p. 220). Yet, despite this asymmetry, Linell also argues that the existence of cooperation as an orientation to shared understanding seems to be a fundamental requisite for any communicative event carried out by participants involved in it. In the next section, I will discuss in more detail this aspect.

6.2.3 The Collaborative Nature of the Construction of Knowledge

In this section I shall illustrate the intrinsic cooperative nature of the construction of knowledge. To do so, once again I will use Hymes's heuristic of components of communicative acts, focusing on the components of purposes-goal and purposes-outcome, represented as Ends in the heuristic SPEAKING. Also, I will draw on the claims about the intrinsic cooperative nature of communicative events as discussed by Linell (1998) and Maybin (1996a). Finally, I will refer to Mercer's (1995) concept of

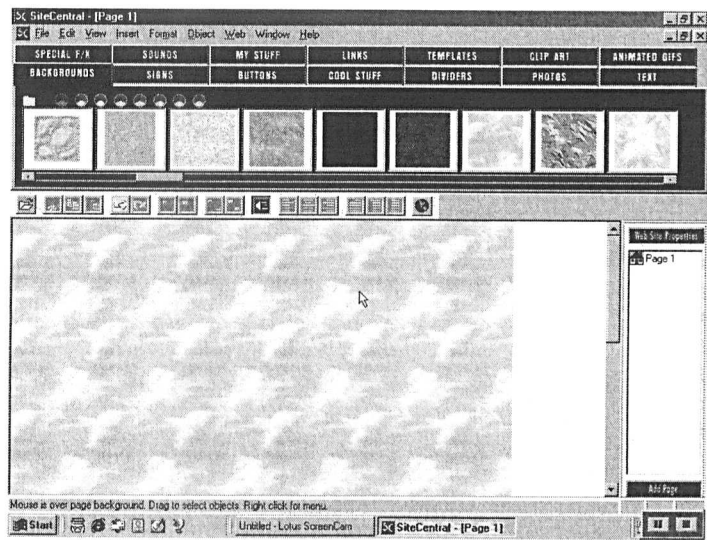
guided construction of knowledge to complement the analysis of the transcript presented next.

The following transcript represents an example of the communicative event of “choosing backgrounds”, by dragging and dropping this visual element into the blank space of the screen to create a WebPage, and the dialogue around this event. The transcript starts when the children have been asked to start working on a new WebPage. Children were provided with an activity card in each session designed to a) helping them with some software commands, b) providing a structure for the task by prompting them to write down specific information, and c) describing the steps which need to be followed to continue working on the construction of their WebPage. Thus, by this point of the session they have been reading together the first page of this activity card that has just asked them to write down how the background for their new WebPage will be:

Transcript 6.3. Clouds.

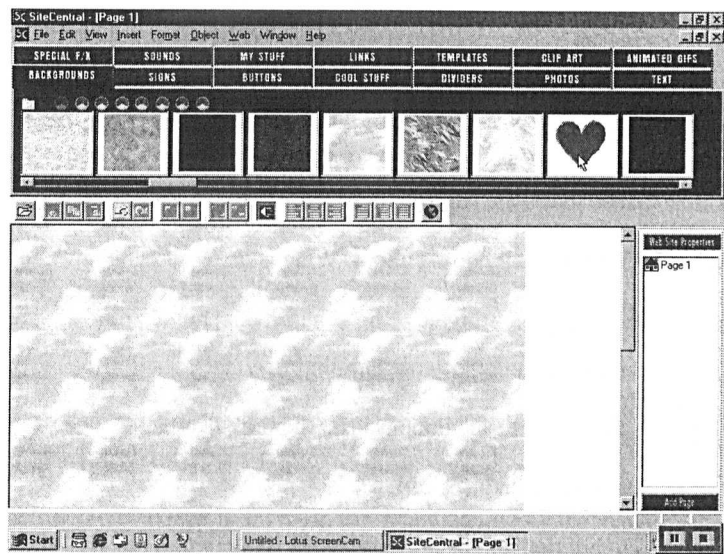
1. Annie: OK. So. “The colour of the background will be”. (Reading from the activity card). What colour do you want it to be?
2. Nancy: You just go through (the background tab).
3. Annie: Yeah, just go through? Yeah? Jake? Scroll them all. // It will be an introduction sort of background.
4. Jake: I say the one we did last time, cause it’s about smiley faces.
5. Nancy: Which one?
6. Jake: Erm, keep on going.
7. Annie: Ooh, we did the clouds.
8. Jake: No, we were gonna do the clouds.
9. Annie: Shall we do the clouds or not?
10. Nancy: OK.
11. Annie: Try the clouds?
12. Jake: Yeah.

13. (4 sec. Dragging and dropping the background onto the blank page).



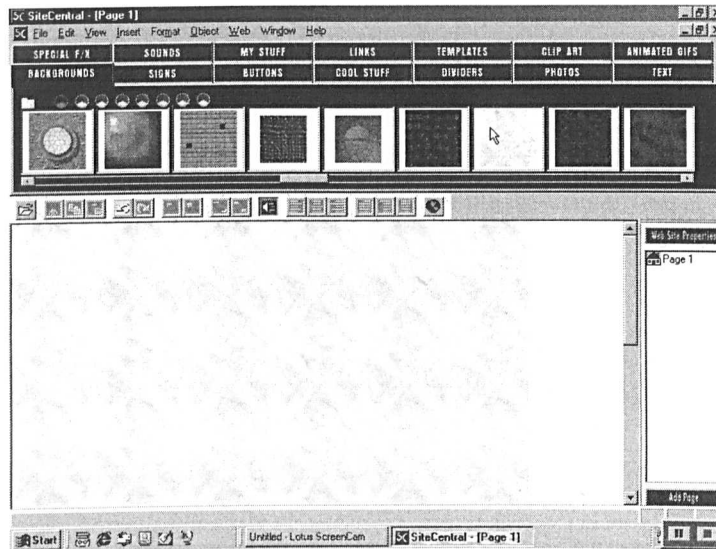
14. Nancy: These are the clouds. Shall we see if there's anything else?

15. Annie: Yeah. Go on. // Hiiiiim! Love hearts, love hearts. Please!!!



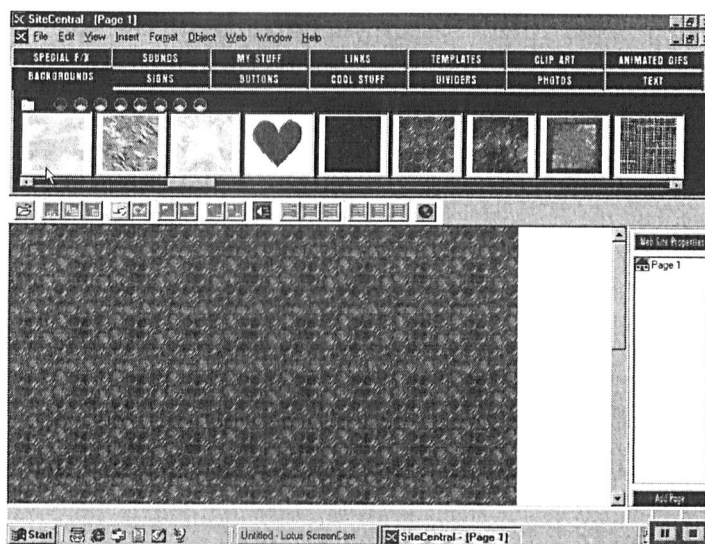
16. Nancy: Which one? (Pointing with the cursor to the background option with a heart) Yeah?

17. (Jake shaking head. Annie dragging and dropping a background of pink patterns on the blank page)



18. Nancy: No, actually no.
19. Annie: No // [Let's have a look to.... it's an introduction...
20. Jake: [You know there's a boy here, so, no hearts.
21. Annie: No, no, no, it's an introduction. What about just a plain colour?
22. Jake: Why?
23. Annie: Cause that's the sort of colour you have in a background.
24. Nancy: We are actually doing about. What is she?
25. Annie: Florence Nightingale. She's a famous nurse, but we are doing an introductory, an introductory paragraph.
26. Nancy: A heart, cause she done hearts, she took hearts out
27. Annie: She did, I think. She did.
28. Jake: Yeah, but that's a lot of hearts when you put that on.
29. Annie: No smiley faces. People weren't happy on those times.
30. Jake: Yeah.
31. Annie: Three hundred and fifty five million people died.

32. Jake: They'd be happy for Queen Victoria (pointing the screen, to a group of posh Victorian people?)
33. (Annie laughing)
34. Nancy: just tell me when I stop (Nancy is clicking looking for backgrounds)
35. Annie: Stop! That one (pointing to a background).
36. Jake: Noooo.
37. Annie: I want to see what it is, really badly. (They drag and drop the following background)



38. Annie: Noooo!
39. Nancy: I want to go back to the clouds.
40. Jake: No, just keep on going.
41. Teacher: Colours. What kind of colours will you choose? (Teacher helps them to choose the clouds one)

The resulting page they constructed at the end of the session is:



Hymes (1972a) described the Ends of a communicative act as purposes-outcomes and purposes-goals. Whereas purposes-outcomes refer to the “conventionally recognized and expected outcomes” from a community standpoint (such as a decision, a settlement, or a legal ruling), purposes-goals refer to the strategies of the participants pursuing different goals within the expected outcome of a communicative event (p. 61). Hymes provides the example that “a father-in-law and a son-in-law have opposing goals in arriving at a marriage contract” (p. 61). Thus, the marriage being the purpose-outcome of the event, and the roles played by father-in-law and son-in-law representing different purposes-goals within the same event and outcome expected. Finally Hymes highlights that in both purposes-outcomes and -goals, it will be important to distinguish between the “purely situational or personal and from the latent or unintended”. Thus, following Sapir (1949h), he adds that:

“The interactions of a particular speech event may determine its particular quality and whether or not the expected outcome is reached. The actual motives, or some portion of them, of participants may be quite varied. In the first instance, descriptions of speech events seek to describe customary or culturally appropriate behavior. Such description is essential and

prerequisite to understanding events in all their individual richness; but the two kinds of account should not be confused (see Sapir, 1949h, p. 534, 543, cited in Hymes, 1972a, p. 62).

As I explained in section 5.6, initially I have focused mainly on the explicit goals of the participants to identify the different communicative events as units of analysis present in the literacy practice of the collaborative construction of WebPages in History. Also, I've been discussing the existence of cultural patterns in relation to the ways in which these goals are achieved and the division of labour implied in the pursuit of such goals, as in the previous section. Both research strategies then, are in agreement with what Hymes recommends to look at for the analysis of components of communicative acts. However, the point that I want to highlight here by describing in more detail Hymes's E component in his SPEAKING heuristic tool is the fact that any communicative event requires a basic compromise of the participants to a shared goal in order to take place. In other words, according to Linell, communicative events require at least "a perfunctory cooperation, even if the participation is based on complementarity rather than symmetry". Thus, all communicative events "must be (partially) shared, at least in the sense that they involve both the speaker and her interlocutor(s); parties are mutually other-oriented" (Linell, 1998, p. 225).

In transcript 6.3, the goal of the event is prompted by the activity card that is mediating the efforts of the children in the task, as they are reading in turn 1: *Annie: "OK. So. "The colour of the background will be." (Reading from the activity card)*. The reading of this section of the activity card prompts Annie's request in this respect: *"What colour do you want it to be?"* This is elaborated further in utterances 2 and 3 as to get an agreement of how they will proceed to choose their background by scrolling along the backgrounds tab (e.g. 3. *Annie: "Yeah, just go through? Yeah? Jake? Scroll them all."*). From there, several backgrounds are tried dragging and dropping them onto the blank

page of the programme (turns 13, 17, 37, 41). Several criteria (e.g. 3. *Annie*: ... "It will be an introduction sort of background.") and reasons are provided to support (e.g. 4. *Jake*: "I say the one we did last time, cause it's about smiley faces"; 26. *Nancy*: "A heart, cause she done hearts, she took hearts out") or reject each of them (e.g. 20. *Jake*: "[You know there's a boy here, so, NO hearts."; 21. *Annie*: "No, no, no, it's an introduction. What about just a plain colour?"). However, sometimes, it was just a matter of trying the outcome of dragging and dropping each background (e.g. 11. *Annie*: "Try the clouds?"; 14. *Nancy*: "These are the clouds. Shall we see if there's anything else?"). In any case, they were linked to the existence of a common outcome being pursued by the children, which in some occasions was explicitly reiterated (25. *Annie*: "Florence Nightingale. She's a famous nurse, but we are doing an introductory, an introductory paragraph. ").

According to Mercer (1995), the concept of a guided construction of knowledge in educational settings requires to pay attention to a) the way language is used to create joint knowledge and understanding; b) the ways people try to help other people to learn, and c) the special nature and purpose of formal education (p. 64-85). Amongst the concepts he proposes to analyse the social construction of knowledge he highlights the importance of context and continuity, and the recognition of the use of language amongst participants to get things done. This represents a very similar perspective to what I have been discussing in this chapter drawing on the use of an ethnographic approach to communication to look also to the role of context and the existence of goals determining communicative events amongst other components. Also, as discussed in this chapter, the existence of cultural patterns to do things with words and achieving goals in ways required by the teacher (e.g. the introductory paragraph style of writing) recognises the special nature and purpose of classrooms as particular settings where the teacher plays a key role in terms of explicit instruction. However, in relation to the way

people help each other to construct knowledge Mercer seems to stress the need of being explicit when participating in a communicative event as one of the signs of purposeful and effective construction of knowledge, not only amongst teacher and learners but also amongst peers:

“It is possible to distil from the findings of research a description of a kind of talk which is good for solving intellectual problems and advancing understanding. First, it is talk in which partners present ideas as clearly and as explicitly as necessary for them to become shared and jointly evaluated. Second, it is talk in which partners reason together - problems are jointly analysed, possible explanations are compared, joint decisions are reached. From an observer's point of view, their reasoning is visible in the talk.” (Mercer, 1995, p. 98).

While I agree with Mercer (1995), in relation to the kind of talk that “should be encouraged” for educational purposes (p. 98), I would suggest that the stress made in this description about the features that must be found in a given communicative event to consider it productive in terms of construction of knowledge can have a counter productive effect in the evaluation of its participants as 'inefficient'. Thus, they might be considered lacking knowledge, unwilling to help each other, or lacking of enthusiasm to participate in the common construction of knowledge or pursuit of a common goal.

In the transcripts included in this chapter, and in particular in relation to the analysis of transcript 6.3 that concerns this section, it is possible to see that not many of the features proposed by Mercer as desired for the construction of knowledge were fulfilled. For instance, in transcript 6.3 participants did not make explicit all their reasons in every utterance, but only occurred in some of them as discussed before (e.g. 26. *Nancy: “A heart, cause she done hearts, she took hearts out”*). Also, the way in which the background was chosen did not follow a procedure in which first all alternatives were considered and compared, but rather, backgrounds were tried one after the other, and the

children elaborated on the suitability of each of them for the purpose of the WebPage (e.g. 21. *Annie*: “No, no, no, it’s an introduction. What about just a plain colour?”), until one option got stabilised (e.g. the background of the clouds). In other words, children seemed to be adjusting their interventions to the communicative needs of this event. Yet, I would argue, knowledge was constructed as part of this process, perhaps in different ways where different layers of contextual meaning interacted with each other as discussed in the section about the role of context and the concepts of intertextuality and intercontextuality (see section 6.2.1 in this chapter). In transcript 6.3 we see a similar process going on where elements of the physical context trigger the mention of other historical concepts linked to them, as if these elements present in the context of the activity were “reframed” in different terms reshaping the context of the situation where children are involved (see the discussion on frames in section 4.1.7.4 and also Maybin, 1996a, p. 143-145). For example, I would suggest that the mention of the possibility of using a background of hearts interpreted as perhaps a “girly” preference by Jake (e.g. 20. *Jake*: “[You know there’s a boy here, so no hearts.”), is reframed by Nancy in turn 26 mentioning that Florence Nightingale did take hearts out as a nurse, and it is reframed back again by Jake in turn 27 in the context of the background as a graphic element with “a lot of hearts”, implying that this is not a faithful representation of Florence’s job. Similarly, in turn 29 Annie reframes the possibility of using a background of happy faces as a historical contradiction for the Victorian times when “people weren’t happy on those times” and elaborating in turn 31 about the fact that “three hundred and fifty five million people died”. Yet again, in turn 32 Jake challenges Annie’s perspective by reframing her argument pointing to a picture with a group of posh people mentioning that certainly “they’d be happy for Queen Victoria”.

Thus, the dialogue of the three children can be seen as well as a construction of knowledge without the need of being completely explicit. This is possible in terms of a

process of framing meanings that can always be presented or interpreted in more than one way: e.g. as a “girly” preference, as a graphic element, as a historical concept, etc. Hence, I would suggest that the children’s utterances are continually being constructed, interpreted, and challenged by shifting from a “gender frame”, to a “design frame”, and to a “historical frame” in which the meaning of what is going on in this event is being negotiated.

6.3 Conclusion

From an ethnographic approach to communication, in this chapter I have presented an analysis of three different communicative events that took place as part of the collaborative construction of WebPages in History by primary school children in the UK, one of the new literacy practices that have emerged with the use of ICT in educational settings. The three events analysed were “choosing pictures”, “choosing and typing paragraphs” and “choosing backgrounds”, looking at the way in which different components of speech, as listed by Hymes (1972a), were shaped by a) the role of context, b) the existence of cultural patterns and division of labour, and c) the intrinsic collaborative nature of communicative events.

In relation to the role of context, I argued that context was constituted by the physical circumstances and objects deictically present in the children’s utterances. However, as part of the context, other psychological elements were also important such as the fairly informal, playful, and in moments authoritarian nature of the participation of the children, and the different positions that each child assumed as part of her/his work in group. Yet, another contextual process identified in the event was the intercontextuality of their utterances by invoking situations and participants not present in the actual setting of the event and brought into the conversation as arguments supporting different positions. Finally, analysing this communicative event I also discussed the collaborative

nature of their efforts to choose a picture despite of the apparent lack of exploratory talk and very limited invocation of the TTS.

With respect of the existence of cultural patterns and division of labour in communicative events, I showed how there was a pattern of “choosing and typing paragraphs” characterised by I) The insertion of a text box with a particular font type, II) Typing of the text of the paragraph as mediated by the use of a historical project elaborated before hand, III) The silent typing and the occurrence of sporadic spelling while capturing text, IV) An adjustment of the font size, and V) A general structure for the writing such as the existence of an introductory paragraph style of writing instructed by the teacher. I discussed that this pattern was the result on the one hand of the constraints and affordances of the tools mediating this task such as the software, and on the other, the consequence of a cultural determination of how to carry out the task mediated by a writing genre. I extended the discussion of the notion of genre to include the distinction made by Bakhtin about primary and secondary speech genres representing centripetal and centrifugal forces coming together for creating meaning and shaping the utterances of an event. Also, analysing the event of “choosing and typing paragraphs” I showed the existence of a structure of division of labour amongst the children that seemed to be informed by the use of the ground rules of exploratory talk (or TTS), despite any possible asymmetry embedded in the complementarity of the tasks carried out by the children.

With regards to the intrinsic collaborative nature of communicative events (that was also slightly mentioned in the discussion about the role of context), in the communicative event of “choosing backgrounds” I showed how to be able to participate in a communicative event participants must agree, at least partially, on a shared goal. I showed how in this event, the goal of choosing a background was prompted by the use

of an activity card, and later, elaborated and established as a shared aim to be pursued by scrolling along the backgrounds tab trying different choices. As part of this process, children also established criteria and provided reasons to support and reject different backgrounds until one got stabilised, partly because the teacher helped them to do so at the end of the event analysed. Finally, in this section I also discussed how Mercer's concept of the guided construction of knowledge is a useful tool to investigate features of classroom talk that seem to be productive in this respect. However, I also suggested that Mercer's stress on the explicitness of utterances as a key element for the construction of knowledge might have a counter productive effect on the evaluation of more implicit conversations as ineffective ways of constructing knowledge. Thus, I showed how children managed to construct knowledge by framing their contributions in relation to different contexts of interpretation that in turn allowed them to evaluate different background alternatives from the perspective of different simultaneous meanings, without being fully explicit about them.

The analysis of context, patterns, division of labour, and collaboration as structural elements shaping utterances in communicative events has a direct impact on the evaluation of the use of exploratory talk by participants. If, according to Hymes, and as I have showed in this chapter, different components of speech need to be analysed in order to provide a full account of the nature of communicative events and their rules of speaking, then any claim of the use of exploratory talk as adequate or not should be placed in this perspective as well. In other words, I would argue that any evaluation of whether participants are being effective or not in the way they construct knowledge cannot be only a function of the degree of explicitness of their utterances, but also a function of the degree of their adjustment to the communicative requirements of the activity in which they are engaged. This is actually what Hymes (1972b) concept of communicative competence is about:

“... the goal of a broad theory of competence can be said to be to show the ways in which the systemically possible, the feasible, and the appropriate are linked to produce and interpret actually occurring cultural behavior” (p. 286).

Hymes proposed that communicative competence involves knowing not only the grammar rules of a given language, but also “what to say to whom, and how to say it appropriately in a given situation. Furthermore, “it involves the social and cultural knowledge speakers are presumed to have which enables them to use and interpret linguistic forms” (Saville-Troike, 2003, p. 18).

In this perspective, my claim would not be that any intervention of a child would be as efficient as any other utterance in the construction of knowledge, but that its evaluation should be carried out on the light of the communicative competence of the participants in a given situation. Thus, I still think that when exploratory talk is present, reasoning is more visible in the talk of participants, and formal educational ways of using language are being practised. However, these ways of using language are special in the sense of being particularly purposeful in the explicitness of the discourse. They are like a linguistic scaffolding, that are more often used by teachers and tutors than peers, and when used by peers requires a special effort on their part in order to follow the ground rules of exploratory talk (Fernández et al., 2001). Therefore, as any other scaffolding, I would argue that one we must not feel disappointed when it is not present in every communicative event given that, as I have shown in this chapter, within the communicative competence of the children, there are many possible ways to construct knowledge as part of a given situation.

In addition, in relation to the impact of the use of ICT in education and the emergence of new literacy practices, according to the results of the project, and in particular to the events analysed in this chapter and the ones I will analyse in Chapters 8, 9 and 10, I

would argue that one of the most recurrent features of this type of communicative events is the heavy reliance of utterances on other modes of communication, particularly in relation to visual elements. Deictic terms such as “this”, “that”, “here”, “there”, “it”, indicating constantly the exophoric reference to elements in the screen that change rapidly, and with the cursor of the mouse as a very important shared visual reference, are a common feature of conversations around computer activities. Therefore, it is important to incorporate more modes of communication within the transcript to make the meanings that participants are constructing in a multimodal interaction, available for the analyst in the closest possible way to the perspective participants have within the situation (e.g. see Gillen, 2002; Norris, 2002). For instance, as it can be noticed in this chapter, the inclusion of pictures of the screen where the children are working around provided a very important element of interpretation for the utterances of the children and the recognition of different contextualising factors and frames of reference of the participants for the construction of knowledge.

In the next chapter, I will describe the analytical framework I followed in order to answer the second research question pursued in this study: **“What categories of meaning were constructed by children using language in social interaction, according to the activity frames of a) design, b) History, and c) group work?”**

CHAPTER 7. METHOD FOR THE ANALYSIS OF COMMUNICATIVE EVENTS AND SITUATIONS IN RELATION TO ACTIVITY FRAMES.

7.1 Analytical Framework

The analytical framework that I use in Chapters 8, 9, and 10 was developed focusing on the use of ethnographic tools (e.g. Green & Bloome, 1997; Hammersley, 1990). Thus, in this chapter, the main objective is to describe such framework and to explain how I used it for the analyses of the relationship between communicative events and situations. These analyses, in turn, were directed to the investigation of the categories constructed by participants in relation to the activity frames of design, History, and group work. In this respect, I do not only focus on discourse but also on other data sources drawing on the following principles of ethnographic research:

7.1.1 Data Collected Based on Participant Observation.

Ethnographic research requires the collection of first hand data emerging from the activities of participants in real world natural contexts (Hammersley, 1990). In this sense, the researcher becomes a participant of the situation where he/she collects information by observing, making notes, talking to people informally, interviewing, etc. The researcher can be known by others explicitly as researcher or not, and also there are degrees of involvement of him/her in the activities of those being studied (P. Atkinson & Hammersley, 1994). In any case, however, the researcher needs to be on site, not only to collect data, but also to be able to understand the perspective of the participants, or in other words, to be able to have an *emic* perspective.

In the case of the main study reported in this thesis, as explained in Chapter 5, I was a participant observer of the activities that took place in the primary school ICT room. All

the children acknowledged my role as a student-researcher from the Open University working with the teacher to produce the activity cards that they all used during the sessions and to support the activities oriented to the construction of the WebPages. Being present in the ICT room during the sessions also gave me a position of progressively legitimate participation that allowed me to provide eventual help in small-group activities when the pupils had a problem. My role as participant researcher also included the task of setting up the cameras at the beginning of the session and monitoring the recordings of the two focus groups throughout the programme. Thus, in general, although the teacher was always in charge of the activities, I also had an active involvement during the sessions in a secondary-supporting role while observing the activities, talking occasionally to the children, and making notes.

7.1.2 An Emic Perspective

One of the main objectives for collecting data in ethnographic research is to find out what is the perspective of the participants about the phenomena under investigation. In order to do this, it is necessary to be specific about the details of activities where participants are engaged and the ways in which meanings are constructed as part of their involvement in a situation. Hymes (1996b), discusses this point in a similar fashion by indicating that one of the missions of ethnography is about overcoming "the limitations of the categories and understandings of human life that are part of a single civilisation's partial view" (p. 7). That is, he argues in favour of ethnographic accounts that provide new perspectives that might be different to the ones originally thought from an "outsider" point of view. He provides the example of how a researcher may have in mind a set of categories or patterns, which can be actually different from the ones found once the field study is carried out and how other categories emerge on the basis of principles that had not been foreseen. Finally, Hymes also explains how the term *emic* was developed by the linguist Kenneth Pike (1965) as derived from "phonemic", the

particular system of sounds he was researching in action, that is opposed to “phonetic”, the term used for the general system of sounds in theoretical terms.

For the purpose of this study, I had a particular interest in finding out to what extent: a) the historical content as defined in the curriculum, b) the principles of design for multimodal documents proposed in the activity cards, and c) the ground rules for exploratory talk (or Thinking Together Skills), as a set of categories established institutionally, were actually mediating or not the activities of the pupils. More specifically, I wanted to find out to what extent these systems of categories were actually appropriated, mastered and/or transformed along the sessions, and to what extent other categories in these activity frames could be also observed. Thus, the research questions addressed in this project following this principle of ethnographic research have been designed as a dialogue between an *etic* and an *emic* perspective, or on other words as a relationship between institutional/theoretical categories on the one hand, and participants/in-action categories on the other.

7.1.3 The Use of Multiple Sources of Information to Achieve a Better Understanding of the Situation.

In order to understand the perspective of the participants in relation to the activities they were engaged and the meanings constructed in practice, it is necessary to have a picture of the situation as full, systematic, and comprehensive as possible (Hymes, 1996b). This full picture can only be generated by drawing on different data sources and collection methods providing each a different aspect of the situation from different vantage points. In other words, as Banister et al. (1994) have expressed in relation to a multimethod approach to data collection:

"[A] multimethod approach reduces the risks that can stem from reliance on a single kind of data, which might mean that one's own findings are

method dependent. It also means that triangulation is possible, allowing the researcher to compare data collected by different methods" (p. 36)

Triangulation, therefore, as a result of using multiple data sources "allows illumination from multiple standpoints, reflecting a commitment to thoroughness, flexibility and differences of experience... thus facilitating richer and potentially more valid interpretations" (Banister et al., 1994, p. 145).

A similar point to this is the one presented by Uzzell (2000) in relation to the use of an ethogenic approach as a fundamental aspect of ethnography. The main assumption of ethogenesis as a way to discover the perspective and theories of participants, is that "human social life is a product of an interaction between sequences of actions and talk about those actions" (Marsh, Rosser, & Harré, 1978). Drawing on Marsh et al., Uzzell (2000) asserts that:

"...since the same skills and social knowledge are involved in the creation of both action and accounts of that action, then the researcher has two mutually supporting and confirmatory ways of revealing the underlying system of social knowledge and beliefs. Marsh et al. go on to argue that the best (but not the only) authorities as to what action is and means, are the actors themselves. This is not to say that such accounts are in any sense 'true'... but [these] accounts serve to confer meaning and status on their own world structure" (p. 238).

In the case of the main study, I used the WebPages, responses to activity cards, concept maps, interviews, ethnographic notes and dialogues around the computer to triangulate the information in order to reach a valid, comprehensive picture of the perspectives of the participants. Following an ethogenic perspective, I used interviews and ethnographic notes in particular to provide confirmatory evidence of the meanings of the participants as voiced by them and as reported in my ethnographic notes in the form of descriptions and commentaries.

7.1.4 Emphasis on the Discovery of Culture and the Importance of Context in Discourse, Practices, and Tools.

According to Spradley (1979), ethnography can be conceptualised as a "culture-studying culture. It consists of a body of knowledge that includes research techniques, ethnographic theory, and hundreds of cultural descriptions. It seeks to build a systematic understanding of all human cultures from the perspective of those who have learned" (p. 10-11). This emphasis on culture has been also discussed by Gee and Green (1998) in terms of the existence of cultural models that, for instance, are associated with specific practices and particular uses of words that invoke meanings, patterns, and contexts based on our past experiences. Thus, their conception of cultural model as they use it for doing ethnographic research is:

"Cultural models are usually not stored in any person's head but are distributed across the different sorts of "expertise" and viewpoints found in a group (Hutchins, 1995; Shore, 1996), much like a plot of a group-constructed (oral or written) story in which different people have different bits of information, expertise, and interpretations that they use to contribute to the plot being negotiated. Through this process of joint construction of text, then, members construct local meanings that they draw on to mutually develop a "big picture"." (Gee & Green, 1998)

By emphasising the collective textual aspect of cultural models and the situated nature of meanings, Gee and Green reformulate the cognitive metaphor of schemes, scripts, or models determining behaviour (e.g. D'Andrade, 1990; Shank & Abelson, 1977) into a metaphor based on the construction of collective narratives and principles for action as embedded in the use of language as cultural tool.

In the study presented here, I followed Gee's and Green's conception of cultural model as a tool to find out about the role of culture in relation to the historical contents, design principles and group work strategies that they put in practice in the activities they were

involved. In this respect, the role of culture was not only analysed in relation to discourse and practices but also applied to the use of material tools such as the software for constructing the WebPages and concept maps, activity cards, and books in terms of affordances and constraints.

7.1.5 Data Collection and Analysis as Topic- and Theory-Oriented

In order to investigate the perspective of participants as emerging out of the data collected from participant observation, based on multiple methods of collection and the generation of usually unstructured data, it is important to have an open mind to let the data "speak for itself" (e.g. Ellis & Bochner, 1996). Nevertheless, according to Hymes (1996b), having an open mind should not be taken to the extreme of conceptualising ethnography as empty-minded, and that ignorance and naiveté are wanted (p. 7). On the contrary, Hymes proposes that doing ethnography involves being topic- and/or hypothesis-oriented, and to know as much as possible on entering the field of enquiry. Thus, the more the ethnographer knows and is able to document what is known so far about the topic being researched, "the more likely the ethnographer will be able to avoid blind alleys and pursue fruitful directions, having a ground sense of what kinds of things are likely to go together, what kinds of phenomena need minimal verification, what most" (Hymes, 1996b, p. 7-8).

Similarly, Green and Bloome discuss the different relationships between theory, method, and technique in the social sciences and in particular in cultural anthropology to conclude that:

"[in order] to understand what counts as ethnography in social science, readers must examine not only how ethnography is being undertaken but also the theories, purposes and questions of the disciplinary *and* academic field for the ethnography. Ethnography, thus, can be viewed as logic-in-use (Pelto & Pelto, 1978) within and across sites, and not as a unitary

perspective with a single set of criteria for use." (Green & Bloome, 1997, p. 185).

Thus, for Green and Bloome it is essential to look at the relationship between theory and method to be able to understand and to engage in all aspects of ethnography. Also, following Heath (1982), Green and Bloome clarify that although they are not claiming that ethnography should be carried out only by anthropologists, it is necessary to understand the historical roots of this approach as originating from anthropology and in this sense, it should not be separated from its theoretical assumptions in relation to culture and everyday human life. Nevertheless, to conclude this discussion about how to understand ethnography within the social sciences, Green and Bloome propose that when applied to other fields of study such as Sociology or Education it is very important to understand and clarify the implications of this adaptation in terms of research questions, purposes, and theories. In this respect, ethnography is:

"... a theoretically driven approach that is situated within a particular site, a discipline within a field. These sites, and their related questions, purposes, and theories shape the practice of ethnography. Viewed in this way, ethnography is a situated approach to the study of everyday life, and ethnographic practices reflect the inquirer's disciplinary grounding and his or her logic-in-use." (Green & Bloome, 1997, p. 185).

In the study presented here, my main theoretical approach is sociocultural theory within educational psychology, based on the seminal ideas of Vygotsky (1978; 1987), Bakhtin (1981; 1986b) and Voloshinov (1986), and elaborated further by other researchers as I discussed in Chapter 2. Additionally, I use some concepts developed by sociolinguists such as Goffman (1974) in terms of frame analysis, as well as other researchers in IS, as I discussed in Chapter 4. Lastly, I use concepts developed in literacy research, in particular the New Literacy Studies and their emphasis on literacy practices as I also discussed in Chapter 2.

Thus, in Chapters 8, 9, and 10, I will use the following heuristic based on the previously defined five principles of ethnographic research to look at the meanings participants brought and constructed within the literacy practice of constructing WebPages in History:

- I. In each chapter, I will look at different data sources systematically, triangulating, and elaborating a conclusion about the categories constructed by participants within each frame, based on the evidence provided by each of these sources. Using NVivo, the data will be codified, identifying themes (Kvale, 1996), organising it with data reduction and data display techniques (Miles & Huberman, 1994), and also using whole-part contrast, and identification of relevance (Castanhera, Crawford, Dixon, & Green, 2001; Gee & Green, 1998).
- II. The evidence provided from different data sources will be analysed from an *emic* perspective, looking at situated meanings, and showing how principles of design, historical narratives, and the TTS were appropriated, transformed, and/or mastered by participants. In this respect, I will be analysing the dialogues around the computer, and within interviews as communicative events.
- III. Also, an analysis of the role of culture in the interpretation of the uses of tools by participants will be carried out. Particular emphasis will be placed on analysing affordances and constraints of different cultural tools for the practice under investigation. (See section 5.3 for a list of cultural tools taken into account in the analysis).
- IV. In the analysis, explicit links with theory will be elaborated, in particular to the three disciplines informing this study: sociocultural theory, sociolinguistics, and New Literacy Studies.

In order to provide a comprehensive account of the literacy practice under investigation, this heuristic will be applied to communicative events, ethnographic notes, and the

products constructed by participants as a tool for analysing activity frames, following other researchers who have proceeded using similar research strategies applied to data sets (Goodwin, 1997; Säljö, 1995), and particularly in the field of literacy (e.g. Castanhera et al., 2001; Lacasa & Reina, 2003; Triplett, 2002).

CHAPTER 8. THE ACTIVITY FRAME OF DESIGN

8.1 Literacy and Hypermedia

The introduction of ICT in educational contexts, the use of Internet in classrooms, and more recently the curricular request for creating hypermedia documents in primary schools (Department for Education and Employment & Qualifications and Curriculum Authority, 1999) have had a lot of implications for the traditional definition of literacy, as I discussed in section 2.2. In this respect, it is important to discuss the features that make hypermedia different from other printed and electronic documents in terms of reading and ‘writing’ skills. The literature indicates that there are three main attributes about the way information is presented in this new type of documents: non-linearity, multi-modality, and malleability.

Non-linearity entails the possibility of connecting concepts in a hypermedia document in multiple ways, through the use of links (Rassool, 1999). These “hyperlinks”, as they are called, can connect bits of information from one page to another or into the same page. Multi-modality involves the possibility of presenting information not only in plain linear prose, but also using graphics, pictures, audio and video (Heath, 2000). Finally, malleability is the attribute of arranging information as part of a seamlessly unique document “without patches” (McNabb, 1997), in which the content and the organization of information can be altered, modified, and updated constantly (Whalley, 1990).

According to Reinking (1997), this three attributes of hypermedia documents make them to be perceived as dynamic entities, alive and flexible in contrast with the usually perceived as inert and fixed printed texts. The interaction of the reader with hypermedia documents to negotiate and construct meaning in the process is, therefore, more active and immediate. Thus, in the next section I explain in more detail the specific demands

that students interacting with hypermedia documents need to meet in order to construct meaning while reading or 'writing' them.

8.2 Reading and 'Writing' Skills Related to Hypermedia

According to Reinking, Labbo & McKenna (1997), the efforts for studying both processes have started with some research primarily carried out about reading strategies (e.g. Reinking, 1994), but little has been done in the area of 'writing' skills (e.g. Turner & Dipinto, 1992). In addition, Reinking et al. (ibid.) have criticised the fact that many studies are carried out in an atheoretical way, documenting the affordances of hypermedia in schools, but not discussing the theoretical implications of these affordances from specific analytical frameworks. More recently, however, some authors have developed theories of "multimedia literacy" from a cognitive point of view (e.g. Mayer, 2000, 2003; Schnotz, 1997; Schnotz & Lowe, 2003), as well as proposing a "muliliteracy" approach using a SFL perspective (e.g. Kress, 1997; Unsworth, 2001).

On the one hand, the literature reports that reading hypermedia requires students to do this action transversally rather than in a linear way (Heath, 2000), allowing them to choose the path they want to follow for processing the information, and virtually allowing the creation of unique texts suited to the needs of the reader in each case (Reinking, 1994; Schnotz, 1997). Similarly, it has been claimed that students not only need skills for decoding written texts, but also for decoding visual and audiovisual material. Thus, Flood, Heath and Lapp (1997b) have argued that such audiovisual skills are essential for understanding the meaning represented in these other modalities. Finally, researchers have claimed that reading hypermedia requires from students the ability to compare different perspectives which might not be connected clearly or meaningfully as in a linear printed text (Campbell, 1998; Salomon, 1998).

On the other hand, research about 'writing' skills in hypermedia has not received the same attention as reading. For instance, it has been found that 'writing' hypermedia documents usually gives the students a new and different perspective on how technology can help to organise and synthesise information (e.g. Turner & Dipinto, 1992). In addition, Whalley (1990) has proposed that the best way to 'write' a hypermedia document is by exploiting the attribute of malleability for presenting multiple perspectives on a particular topic, so that menus can be used as a framework for providing coherence to the information. Finally, the notion of 'writing' has been challenged as a construct that refers only to the construction of meaning as a combination of words. As a result, the term 'design' has been suggested (Kress, 2000; New London Group, 1996) as an alternative concept which captures more accurately the particular process of construction of meaning in multimodal electronic documents, as I have discussed in section 8.1.

However, despite the proposal for new definitions of terms, there is a gap in current research about the actual strategies taken by participants in the 'design' of hypermedia documents as a social situated process. That is, although some authors have studied the relevance of semiotic theories informing hypermedia construction and pedagogy (Lemke, 1998; Unsworth, 2001), and the exploration of the cognitive effects of using different designs in the construction of hypermedia (Mayer, 2003; Schnotz & Lowe, 2003), there are no studies, as far as I am aware, investigating the process of construction of hypermedia documents as a situated process achieved in social interaction. Therefore, further research is required in order to explore the different ways in which hypermedia documents are designed using different semiotic resources, and particularly in investigating the methods taken by students in order to choose a specific mode of representation and construct a message in hypermedia documents, as I also discussed in section 3.3.2.2. In this respect, next I will describe how participants in my

study constructed categories of meaning as part of the activity frame of design, by drawing on the cultural tools available to them, and in particular how they appropriated, mastered, and/or transformed the “principles of design” that they were asked to follow.

8.3 The Principles of Design

In section 5.3, I described the different tools that were used by participants in the literacy practice of constructing WebPages in History. Amongst these tools, I mentioned the “design principles” that I had prepared for the students as part of an Activity Card, shown in Appendix 1. In general, the principles had to do with a) the relationship of pictures and backgrounds with Victorian aesthetic standards, b) the use of contrasting colours in fonts and backgrounds in order to be able to distinguish them, c) choosing fonts related to the handwriting style and the typing characters used in Victorian times, d) the correspondence between images and words in terms of contiguity and congruency between them, and e) the suggestion of using an organised menu of links for the reader.

Using the methodology described in the previous chapter, I found that within the activity frame of design, students constructed in interaction several categories which reflected the appropriation of these principles. For instance, I found that students invoked in their dialogues around the computer and during the interview, notions of a) visibility, b) organisation, and c) visual semiotics. In addition, pupils also showed the appropriation of these categories, reflected in the careful manner in which they chose colours, organised the information, and selected pictures for their WebPages according to the design principles shown in the activity card.

Moreover, in the interaction around the computers and during the interviews, children also talked about issues that reflected a deep understanding of the process of design, when they invoked their awareness of d) actions and textual moves and e) sense of

audience. Finally, students also showed instances in which they seemed to be contesting the design principles as when they expressed their f) personal aesthetic preferences.

I have produced a comprehensive analysis of all these categories. However, given the word limit of this dissertation, I will present in more detail the analysis of just three of these categories: visibility, sense of audience, and personal aesthetic preferences, illustrating how these represented ways of appropriating, mastering, transforming or even resisting the use of the design principles, and how they were constructed in social interaction as part of the activity frame of design.

8.3.1 Visibility

This category represents the mentions of, and references to the use of the following criteria: 1) using colours that are not too bright, 2) keeping contrast between background and other visual elements, such as pictures, links, and writing, and 3) being careful about the size of elements.

8.3.1.1 Activity cards

The presence of this category was identified in statements written down by pupils in the activity cards in which they were prompted about what kind of colours, backgrounds, and writing they would be using for constructing their WebPages. For instance, they wrote: *"Background must be colourful", "The background colors is going to be blue and the writing is going to be orange", "they [pictures and writing] link up in the same way and look good"*. Also, when they were reviewing their peers' as well as their own WebPages by using a reviewing check list and other prompts in their activity cards they mentioned: *"I think that the colours and pictures go together", "[you can improve your web page by] the colours of the writing and background", "and we can't read it [the page] with the green background"*.

In general, all these statements indicate the awareness they had about the design principle of using contrasting colours in backgrounds and fonts, as well as the relationship with pictures, in order to facilitate the reading of these graphic elements.

8.3.1.2 Interviews

During the interviews, when they were asked what they would recommend to other children if they were going to construct a WebPage, they mentioned: *"don't make [your background] too bright", "I would advise them not to put pictures too wide otherwise it wouldn't look right if it was still that tall but that wide, it wouldn't look right and also the people would be extremely fat", "I would tell them to do the writing so people would see it and try to get it nice typing up", "to make sure that you can read it [the link] - change the colour or change the background so you can read it"*. Similarly, when they were reviewing their peers' as well as their own WebPage during the interview they mentioned: *"the black writing you can see it but it mixes too much with the smiley faces", "I like the background cos it matches with the writing and um, the background is quite dark and the writing is quite light so it matches. You can read it quite good"*.

The utterances presented here reflect how children appropriated the design principle related to visibility, and how it was interpreted not only in relation to the use of colours in backgrounds and fonts, but also in terms of sizes of pictures, and typing styles.

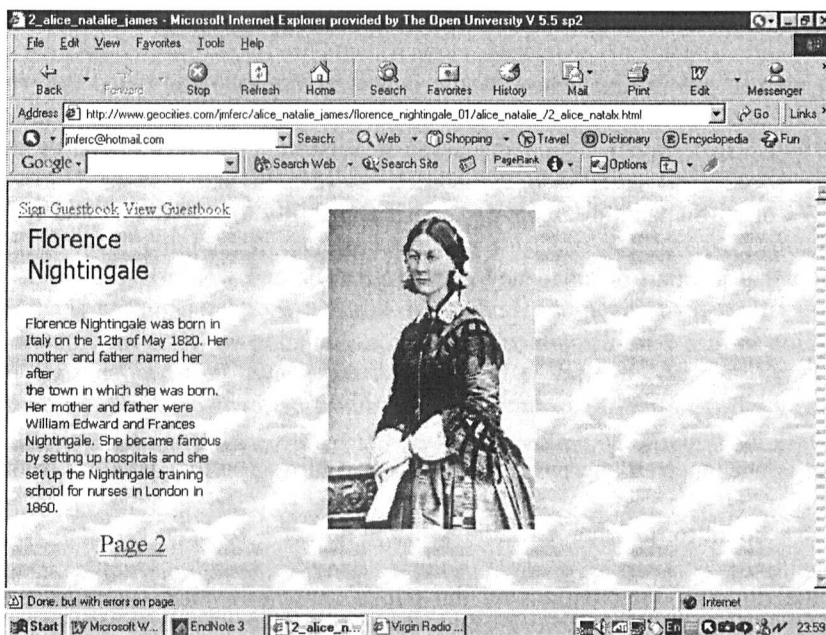
8.3.1.3 WebPages

Analysing their WebPages, it was noted that out of the 37 WebPages constructed, there were only 3 cases of lack of visibility: one where the background was marine blue with black squares and the title was black, another one where the background was a dark green wrinkled paper texture and the title was black, and finally, a third one where the background was purple and black in a wrinkled texture and the font of the title was red. The rest of the pages and the pictures included in the WebPages were all visible.

8.3.1.4 Communicative Event

Finally as an example of how this category was invoked in the actual conversations of the participants around the computer, the following communicative event where they are writing a paragraph about Florence Nightingale provides an illustration of this process achieved in social interaction:

Transcript 8.1. Two Spaces



1. Jake: No, no, no, "place in which she was born" (typing while reading from the screen). Spaces
2. Annie: I have, that's two spaces.
3. Jake: Yeah. It looks better two spaces.
4. Natalie: No, it don't
5. Jake: Cos I can't read it.
6. Natalie: No it says, it says, what you've finished, you have too many spaces in your work, sorry.

7. Jake: Yes, but I can't even really see "in which", it just sounds like a compound word.
8. Annie: Yeah, but we're not gonna read it.
9. Jake: Other people are exactly. They, they'll need spaces.
10. Annie: Yes, but they'll be used to computers. I see the spaces. I'm used to computers. I'm not like (approaching her face to the screen). I can see spaces, I can see spaces.

In this communicative event where children are writing together a paragraph, there is a discussion about the amount of spaces that are being typed between two words. In this respect, we can see in turn 2 how Annie indicates that Jake has typed the words "in which" with "*two spaces*". As I discussed in section 4.1.2, in CA one of the main challenges of participants in a conversation is the ability to understand and respond to utterances that are part of adjacency pairs. In this case, I would suggest that Annie's intervention in turn 2 implies a demand of an explanation which is interpreted by Jake in this way when he replies in turn 3 that "*it looks better two spaces*". However, his response is not received approvingly by Nancy in turn 4, so that Jake has to elaborate further to account for his choice when he says in turn 5: "*cos I can't read it*". In turns 6 to 10, the different interventions of the pupils show how each utterance make the children accountable (Potter, 1996) for explanations which in turn invoke different interpretations of the action of seeing and the features required in an object to be visible. For instance, the way this process takes place is evident in the use of apologies while a feature is being highlighted, like when Nancy says "*sorry*" in turn 6, once she has told Jake: "*You have too many spaces in your work*". Also, the different interpretations of the category of visibility are evident in statements that refer to the proximity of words (like when Jake mentions that it "*sounds like a compound word*" in turn 7), and in utterances which call into question who will be evaluating the readability of the words

just being typed (such as when Annie mentions “*Yeah, but we’re not going to read it*” in turn 8).

In addition, the ways these versions of visibility are being discussed, simultaneously construct different subject positions (Davies & Harré, 1990) which the children seem to be willing to defend. For instance, Jake states in turn 9 that people will need spaces, implying that readers will be in a similar situation to him when he asserts: “*other people are exactly*”. I would argue that by saying this he positions himself as a sensible person who is thinking on the needs of other readers. However, in turn 10, his position is contested by Annie who claims that readers will be “*used to computers*”. By stating this, I would suggest that Annie implies, on the one hand, that Jake is not very experienced with computers, therefore undermining his position of knowledgeable person of this type of situations. On the other hand, she positions herself as part of a group of experienced users when she mentions “*I’m used to computers*”, as well as further implying that, unlike Jake’s position, she is not ‘short-sighted’ because she actually “*can see the spaces*”, while she approaches her face very closely to the screen.

8.3.2 Sense of Audience

This category represents the children’s interpretations of an audience. For instance, the references to how they think readers will understand and assess their WebPages.

8.3.2.1 Activity Cards

While they were constructing their WebPages they wrote in the activity cards: “[*colours and background must be*] *bold, interesting, make you want to look at it*”, “[*pictures and writing must be related*] *Other wise it won’t help you and if it does make sence it helps the reader*”, “[*links*] *It helps the reader to find out more*”. I would suggest that the words “*interesting*” and the expression “*make you want to look at it*”, invoke the presence of a reader who might be willing to get engaged with the text. Similarly, when

they were reviewing their peers' and their own WebPages, they mentioned in the activity cards: *"[your web page is] great because it's bright and cola(er)full.and egacainerning for people to see. I finck is grait... It looks fun and it is fine"*, *"[our web page is] Exciting, fun to read"*, *"[our web page is] exiting attractive text and the colours blend in well!!!"*. In this case, the expressions "encouraging for people to see", "fun to read", and "attractive text" refer to attributes that implies a relationship between the actual WebPage and a potential reader.

8.3.2.2 Interviews

In order to show the children that their work had been an authentic experience, including the publishing of their own work, once the children finished the construction of their WebPages I uploaded these to a server, so that children could see their WebPages from any computer with Internet access. The following extract shows how important was the audience for them, both as abstract readers "out there in the world" and as concrete other readers close to this students:

1. Claire: Is the camera off? [Can I say something?
2. Manuel: [No, it's on actually.
3. Claire: I thought it was really fun, cos I never thought that it actually go on the WebPage and that actually is what people going to think about it.
4. Manuel: No... by the way I left a guest book for you to sign.
5. Zahir: I'm going to show to my cousins and all that today, cos they going to come round, I'm going to go to my cousins and everyone is going to come to my house and I'm going to show them.
6. Manuel: Yes, do that please.
7. Claire: And I'm going to get a computer and going to be able to show to my family.
8. Manuel: Yes, yes, do that definitely. And then, I left a guest book for you to leave some comments whenever you want so you can actually read those

comments also to see what other people think about your WebPages. So, have fun.

9. Claire: And we can read: "oh that is not too good."

10. Manuel: No. // Well, I think. How old are you?

11. Claire: I'm 9

12. Manuel: And you?

13. Zahir: 9

14. Manuel: Well, imagine, how many 9 year olds are doing WebPages so far?

15. Claire: Not many.

16. Zahir: Not a lot.

17. Manuel: Not a lot. So you are quite brilliant, so...

18. Claire: Lucky

19. Manuel: Yeah. Lucky also. So I think people is going to appreciate that your WebPages are quite good, and more than, and more when they learn that you are nine.

On the one hand, it is interesting to see how Claire asks in turn 1 if the camera is off. This is also worthy of note from the point of view of the type of communicative event in which we are engaged, such as an interview, in which interviewees are not usually suppose to take the lead in putting forward questions. Thus, I would interpret Claire's move as an attempt to put forward her own agenda, as if she wanted to say something important before the session is over. Accordingly, in turn 3 she asserts how the experience was "*really fun*", and how surprising was for her to see that the WebPages were actually published over the Internet. In addition, she also refers to the audience reading them when she mentions her concern about what "*people [are] going to think about it*". Overall, this statement qualifies her experience during the project, and as such, it would have required an acknowledgement on my part as participant in this conversation. As I reviewed in section 4.1.2, according to Levinson (1983), adjacency

pairs in conversation take place following a preferred organisation, which in this case would be 'assessment/agreement'. However, in this case I produced a dispreferred response in turn 5, introducing a new topic without acknowledging Claire's evaluation of her experience, when I say: "*by the way I left a guest book for you to sign*" in turn 4. Nonetheless, in turn 5, Zahir seems to follow Claire on assessing positively the experience, and in particular, on highlighting the importance of an audience. In this case, the audience for him is very close and concrete, as it is comprised by his cousins. Indeed, his excitement is visible in the way he phrases in a repetitive way this utterance, where he and his cousins will visit each other, taking this opportunity to show "*all that today*", to "*everyone*". In the next turn, I am able to acknowledge Zahir initiative when I say "*Yes, do that please*", and Zahir's idea seems to be taken further by Claire in turn 7, in which she mentions that she is also going to get a computer and show her work to her family. As well as in turn 6, I am able to acknowledge Claire's initiative, but also I take this opportunity to introduce again my previous topic of the 'guest book' which had not been picked up by my interviewees in previous turns. Further, I try to end this interview, when I mention "*So have fun*", but in a dispreferred response Claire decides to go back to the issue of an audience who might write comments such as "*oh that is not too good*". The way she reports this comment as the voice of a possible reviewer, reflects the way in which Claire conceives an audience having a rather strict criteria that she might not meet.

However, in utterances 10-19, it is possible to see how I try to reformulate this conception, and how indeed this process is carried out in a collaborative way. As I discussed in section 4.1.7.2, Linell (1998) claims that a certain degree of social coordination is required in any communicative event to maintain the dialogue as a shared space of common understanding, which nonetheless takes place along with the ever present possibility of ambiguity and differences in the communicative agendas of

participants. Throughout this analysis, I have been showing how the children and I have been trying to coordinate efforts to take turns. In this respect, although we have been successful in carrying out this dialogue up to this point, it is also evident that we have had certain moments in which our agendas do not coincide, as when I have shown moments wherein dispreferred responses have occurred. Notwithstanding, it is in the last section of the interview when our coordination of perspectives become more collaborative. For instance, after I asked their age in turns 10 and 12, and both have answered “9” in turns 11 and 13, I asked them in turn 14 “*how many 9 year olds are doing WebPages so far*”. At this point it is relevant to see how the interpretation of the experience in which they have been engaged is jointly being constructed, starting from the fact that not many children are able to produce WebPages, the qualification of their participation as “brilliant”, and its further reformulation as “lucky”. In this respect, following Gumperz (1995), Goodwin (1995) argues that meaning is co-constructed in social interaction by means of the deployment and interpretation of different contextualising cues. In this respect, the way I say “So... ” at the end of line 17 cues for a completion of this utterance, whose gap is filled by Claire in turn 18, where she interprets their situation as “lucky”. Finally, in turn 19, I sum up this joint interpretative exercise, by assessing their WebPages as “*quite good*”, as if this was the voice of the audience expressed in more benevolent terms than the ones Claire had used before. Additionally, in this turn I imply that the quality of their work will be assessed by readers on the light of their young age: e.g., “*when they learn that you are nine*”.

All of these remarks show on the one hand their great awareness of the audience that would be reading and evaluating their pages, and how the presence of such an audience was jointly constructed by using language in social interaction. On the other hand, the transcript show how important and empowering has been for them to be able to do this work by themselves and how proud and concerned they are to show this to others.

8.3.3 Personal Aesthetic Preferences

The design principles was interpreted as a cultural tool which was sometimes resisted. In this respect, this category represents instances where they seem committed to a very personal way to interpret the activity in which they propose their own criteria to construct their WebPages.

8.3.3.1 Interviews

In the interviews they provided some remarks indicating that designing a WebPage is also an exercise of expressing their personal preferences such as when asked about the kind of background they would recommend using:

1. Manuel: what type of background would you recommend to use
2. Tanya: whatever background they like
3. Phillip: if it was Victorians particularly like flower patterns
4. Tanya: but if it ain't then any - but if it's not Victorian then it could be any kind
5. Manuel: what type of font you can choose
6. Tanya: any really - if it's Victorians, do this kind of font - but if it ain't, they could do any kind

It is interesting to see how my question in turn 1 is interpreted by Tanya in a rather general way when she replies in turn 2: *"whatever background they like"*. This might be considered as a complete dismissal of the design principles. However, it is possible to see how Phillip qualifies further Tanya's previous remark when he refers to the particular case of the topic they have been working in their own WebPages by mentioning *"if it was Victorians, particularly like flower patterns"*. Yet, Tanya clarifies further her point of view, elaborating Phillip's statement when she asserts in turn 4 that if it's any, *"it could be any kind"*. Thus, in turns 2-4 Tanya and Phillip are collaboratively defining the specific uses of the design principles they were given, situating them in relation to particular topics, such as the Victorians, and expressing the

possibility of choosing “any” other options for other topics. A similar process takes place in utterances 5 and 6 where I asked them about the type of font they would choose, and where Tanya reiterates that “*any really*”, but also, “*if this is Victorians, do this kind of font*”.

In another case, in which I was evaluating another WebPage as part of the interview with a couple of girls, they expressed strong opinions about their favourite colours and the personal History of why these colours were their favourites:

1. Manuel: ...you didn't like the background?
2. Ally: no way, I thought it looked Victoriany but I didn't like it
3. Jackie: I do like it cos it's my favourite colour really, it looks Victorian (pointing a purple background)
4. Ally: it's too dark I like bright colours, I've got my room painted the bright yellow that we had on the..., before and then left a wall white and then on the white wall we painted bright orange and I and a bright blue desk and shelves
5. Jackie: I've got a bright colour it's red and blue, well red and orange

Following my observation in line 1 restating the fact that they didn't like the background, in line 2 Jackie makes a clear distinction between following a convention such as choosing “*Victoriany*” elements (e.g. in accordance to the principle requiring the use of graphic elements matching Victorian aesthetic standards), and choosing these elements based on personal preferences, as when she says: “*but I didn't like*”. The opposite case can be noticed in turn 3 when Jackie mentions that she likes it in addition of looking Victorian. In turn 4, it is worthy of note to see how Ally links her preference to the type of choices that she usually makes at home. In this respect, it is useful to highlight the intercontextual processes involved in this utterance which is referring to objects present in other contexts (e.g. the walls of her room, her desk, etc.) which are made relevant by Ally in her utterance to support her point of view. As an adjacency

pair to Ally's previous turn, Jackie also states the colours she also has got in turn 5. In a similar case, in the next interview the children are drawing on other experiences that are made relevant to account for the way they made their choices:

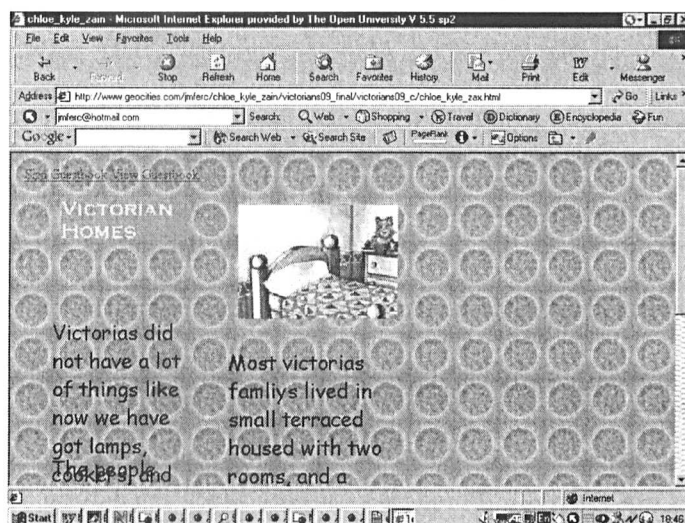
6. Raoul: First, I saw a whole one like this and Sarah saw a whole one, and Jordi say No!
7. Manuel: No! (Laughs) And then.
8. Jordi: And then Jordi saw the one we have now. And I saw this brown one, a sort of brown, cos it reminded me of playing with mud when I was little.

In utterance 1, Raoul is telling a short story about the way they chose the background, which I acknowledge by repeating the last word of his previous turn. Furthermore, I cue for the continuation of it by saying "*and then*", which is followed by Raoul using exactly these words to continue his story. Finally, in turn 3 he uses an intertextual reference of a personal experience from childhood that is made relevant to account for his choice: "*cos it reminded me of playing with mud when I was little*".

8.3.3.2 Communicative Event

The next transcript presents a communicative event where Annie, Nancy, and Jake are evaluating a WebPage of another group of children following a checklist I produced for this activity. In this respect, the question they are addressing is "*Do you like the colours of the background?*". Given the type of question, the discussion starts to develop as a contrasting expression of "Victorians" aesthetic standards and personal preferences that it is very difficult to settle, as they all seem to be valid:

Transcript 8.2. Do You Like the Colour of the Background?



1. Annie: ... Do you like the colour of the background? (reading from checklist in an activity card)
2. Jake: No.
3. Natalie: Yes.
4. Annie: Why don't you like them?
5. Jake: Don't know.
6. Annie: You've got to have a reason.
7. Jake: Cos, that looks like... bored.
8. Annie: What do you mean? I don't know what you mean by bored.
9. Jake: Boring
10. Annie: Why do you think is boring? I think is quite interesting. So, they are looking in different ways, to say different things.
11. Jake: Now, that looks interesting (pointing to another background). Playing water. That looks Victoriany.
12. Annie: So, do you like the colours of the background?
13. Jake: No.
14. (N laughs)

In this transcript, in line 1 Annie starts the evaluation of this WebPage produced by another group of children by asking Jake and Nancy one of the checklist questions of an activity card: *"Do you like the colours of the background?"*. Jake answers *"No"*, and Nancy *"Yes"* in lines 2 and 3 respectively, so that Annie asks Jake for a reason in line 4: *"Why don't you like them?"*, which I would suggest is an invocation of the TTS. Jake just says *"Don't know"* in line 5, perhaps genuinely, as this is a question about preferences, but then in turn 6 Annie seems not to be satisfied with his response, stating: *"You've got to have a reason"*, once more clearly invoking the use of the TTS. In this case, it is interesting to see the reason that Jake provides in line 7, when he mentions *"cos, that looks like... bored"*. "Bored" is a category which can only be defined from a personal point of view, and as such, Jake is accountable for a further clarification. Thus, Annie asks for this in line 8: *"What do you mean? I don't know what you mean by bored"*, which is also, I would argue, another invocation of the use of the TTS. The reply provided by Jake in line 9, *"boring"*, seems not to be very convincing to Annie who repeats her question in turn 10. She also challenges Jake's point of view by saying that she thinks it is *"quite interesting"*, and explains that by using this background the children who constructed this WebPage are *"looking in different ways"*, that they *"say different things"*.

Annie's last remarks are worth noting as they imply an interpretation of this WebPage as a graphic statement which "says" something to different audiences, using a particular perspective, as Lemke (1998), Street (1999b) and Kress (1996) have argued in favour, highlighting the dialogical nature of the design of multimodal electronic documents. These authors have suggested that the process of design can only be understood according to the acknowledgement of the existence of conventions in a given community. However, in this transcript the conventions for what can be considered a "boring", or "interesting" background are not really clear, so that they are subject to

dispute. In this respect, Jake challenges in turn 11 Annie's interpretation of what counts as "*interesting*" when he points to another WebPage which he thinks is interesting. In this turn, he does not only mention that the other WebPage is interesting, but also that it looks "*Victoriana*", a category that has links with the design principles.

From the evidence I gathered in ethnographic notes and transcripts, the category of "*Victoriana*" started to be developed by the teacher in plenary sessions following the design principle that I included in their activity cards in relation to choosing backgrounds, colours and fonts according to Victorian aesthetic standards. In this sense, at this point the issue involved in this dispute between Jake and Annie is the definition of this category in situ as it is made relevant by Jake as a resource for assessing this WebPage. This move makes Annie accountable for a reply assessing this criteria, but instead of responding whether she thinks the background is *Victoriana* or not, by using the cue "*So*" at the start of turn 12 she seems to be dismissing the ground on which Jake is moving the debate, so that she goes back to the original question that triggered this discussion and which implies a personal preference not informed by aesthetic standards: "*do you like the colours of the background?*". Consequently, in turn 13 Jake goes back to his answer of "*No!*", and in turn 14 Nancy just laughs.

I would suggest that although Annie is trying to use the TTS in this event demanding a reason to Jake, she seems ambivalent on acknowledging that this not only raises validity claims (Habermas, 1984b) in relation to sincerity (e.g. is the background "*boring*" or "*interesting*"?) but also in relation to truth (e.g. is this background "*Victoriana*"?). I would hint that one of the reasons of this ambivalence is the fact that sincerity can be highly contested in relation to aesthetic choices, but also that the pupils do not have access to the academic discourse developed in semiotics to be able to get engaged in arguments about the truth of what counts as "*Victoriana*". Thus, addressing this type of

situations, authors such as Heath (2000) have argued in favour of the implementation of formal education in History of Art at an early stage in the curriculum in order to give students access to the appropriate ways in which visual semiotic resources have been used and valued in different communities and historical periods, such as in this case, the Victorian era.

8.4 Conclusion about the Activity Frame of Design

I have shown in this section several instances where the categories relating to the activity frame of design have been invoked or enacted by participants in communicative events, interviews, responses to activity cards and WebPages. In this respect, I would propose that these categories represent the ways in which participants used cultural tools to achieve specific goals related to design issues. This collection of instances of 'visibility', 'organisation', 'action and textual moves', 'sense of audience', and 'personal aesthetic preferences' were materialised as part of a situated activity system (Goodwin, 1997; Säljö, 1995) where a set of cultural tools (listed in section 5.3), mediated in the collective construction of WebPages by the participants.

From this set of cultural tools, for the purpose of design in particular, the software 'SiteCentral' allowed the children to construct their WebPages by interacting with a user-friendly interface which afforded the possibility to drag and drop different graphic elements such as text boxes, images, sounds, etc. Thus, they explored and decided about the use of these semiotic resources for the messages they were trying to communicate in each of their WebPages. Similarly, the library of images that I prepared for the children gathering Victorian images related to their topics, also afforded a set of possibilities to design their pages. In addition, both the use of SiteCentral and the library of images as material artefacts within this situated activity system enabled the use of another cultural tool: the principles of design.

As I mentioned in section 8.3 of this chapter, one of my research interests was to find out to what extent the use of these principles of design as a cultural tool were mastered, appropriated, or even resisted by the children in the construction of their WebPages. In this sense throughout this section, I have presented instances where these principles have been invoked or enacted in different ways. Some of these instances reveal a strong cultural determination that indicated that the participants were following them very closely. For example, within the category of 'organisation' children followed a culturally determined western style of organisation of information that privileged the collocation of text before images, and the beginning of the writing on the upper left corner of the page. Although the principles of design mentioned the principle of organization by means of "*an organized menu of choices or links for the reader to have an overview of what can he or she finds in the site*", the children interpreted this closely in accordance to the western style of writing a traditional page.⁶

There were other instances where children had different perspectives about the enactment and invocation of the design principles. For instance, I discussed how Annie and Jake had an argument about the different interpretation of the category 'visibility' in relation to how many spaces there should be between words. In this transcript, it is interesting how the discussion involves the interpretation of visibility as 'expertise with the use of computers': e.g. 10. Annie:... "*I see the spaces. I'm used to computers*"

⁶ When the WebPages were analysed in relation to the category "organisation of elements", it was found that out of the 37 WebPages, in 29 of them (78.37%) there was a co-presence of text and pictures, in contrast to just 1 WebPage (2.70%) where there was a picture without text, and 3 (8.10%) where there was text without pictures. Also, 14 WebPages (37.83%) were secondary pages linked to 16 main WebPages (43.24%) describing a topic, where the information contained in the first page was extended by means of offering other specific details or examples of the main topic. In 29 WebPages (78.37%) the text was placed at the top left side, in 5 of them (13.51%) it was placed on the bottom left side, 2 of them (5.40%) were in the bottom right side, and in only one of them the text was on the top right hand side. Similarly, in 29 pages (78.37%) the pictures were placed on the top right side, in 9 pages (24.32%) the pictures were on the bottom right side, in 5 pages (13.51%) the pictures were placed in the bottom left side, an finally, in only 3 pages (8.10%) the pictures were placed on the top left side. This implies a very important tendency to organise the text as a classical culturally determined western text (Kress & van Leeuwen, 1996; Norris, 2002) where reading takes place from left to right and where in this respect,

Finally, there were other instances where children were more creative with the use and invocation of the design principles. For example, the use of images analysed as part of the category 'visual semiotics' revealed how participants used pictures that were produced in other contexts, therefore charged with other cultural intentions, and yet the pupils adjusted these images to their own purposes by writing explanatory captions. Thus, the map of the British empire was used by children to argue that *"the world was saved by Florence Nightingale"*, the photograph of a Victorian woman was used to discuss *"the clothes that they had to wash by hand"*, and a photograph of a group of servants was labelled by them as *"a victorian family"*. All of them were instances where the images were 'populated by the intentions' (Bakhtin, 1981) of the children, expressed in the relationship between pictures and captions, as resources to construct their WebPages in a creative way. Additionally, the use of these images are also a good example of how the design principle of *"Whenever you write something in the page next to an image, they have to be related to each other meaningfully, by having the text explaining what you can see in the image, and the image representing what is written"*, was used in a very flexible way given that literal correspondence between images and text was very difficult (and perhaps even undesirable) for them to achieve.

In a similar way, the discussion of Annie, Nancy and Jake about whether they like the colours of a background or not as part of the category 'personal aesthetic preferences' reveals how the discussion of personal preferences was intertwined with issues of visual semiotics which students could not bring to assess a WebPage in relation to more academically defined categories such as the "Victorian aesthetic standards". In the next section I will analyse how children used the historical narratives embedded in their historical projects and in books, as well as appropriated as part of their participation in

words occupy the predominant position in the top left position, and pictures play a secondary supporting role on the top right hand side and elsewhere in the page.

Chapter 8 The Activity Frame of Design

the classroom activities in which they reviewed this topic, were made relevant for the activity frame of History.

CHAPTER 9. THE ACTIVITY FRAME OF HISTORY

9.1 Literacy and Curricular Content

As I discussed in section 2.2, researchers such as Leu & Kinzer (2000), have argued that with the introduction of ICT in schools, curricular content has become more tightly intertwined with literacy activities, so that the learning of literacy skills has become more intrinsically connected to the learning of curricular subjects. Similarly, Wyatt-Smith and Cumming (2001) have proposed the concept of 'curriculum literacies' to characterise the interacting process between speech, writing and reading in class, as "the "mix" of communicative practices and the expected ways of representing the world and learning", involving distinctive ways of using language from subject to subject within the curriculum. In this respect, as I discussed in section 5.6, a second specific question that I pursued in this study was the identification of the categories that participants constructed in relation to the activity frame of History, as a curricular subject in which the topics they were working on for their WebPages were situated. Thus, next I will discuss the specific characteristics of History as a discipline, as well as the writing genres that have been developed to communicate History for academic purposes.

9.2 History as a Discipline

According to the literature (e.g. Bourdillon, 1994; Pluckrose, 1991; Seixas, 1996), History as a discipline can be characterised as composed by different structural elements such as a) significance, b) epistemology and evidence, c) continuity and change, d) historical agency and e) communication.

9.2.1 Significance

This aspect entails the ability of interpreting historical data according to their own circumstances and its relevance for the present. In this respect, according to Seixas

(1996), as students lack the breadth of information that historians have access, they are more likely to make constrained choices about what is to be interpreted as significant in a historical period. In addition, naïve historical thinkers are much more likely to decontextualise the past in the search for meanings for the present, lacking the skills to understand the significance of past events in their lives and interpreting these in an ‘ad hoc’ way ignoring the sociocultural context in which historical events took place. In this respect, according to Pluckrose (1991), the challenge is to develop in the pupils an interest for the past in order to understand the values and challenges of a historical period and its consequences in the present time. Furthermore, some researchers have taken this aspect of History as the fundamental objective of the teaching of this discipline. Thus, Hedegaard (1999) states:

“In my view, the objective of history teaching is to give students an understanding of the connection between differences in living conditions, resources, and societal characteristics in different historical periods so that they can gain insight into how the living conditions and societies of today have developed throughout several periods” (p. 283)

9.2.2 Epistemology and Evidence

According to Seixas (1996), this historical ability can be conceptualised as the responses that students can give to questions such as “How should we handle traces in such a way that we can learn about the past? What accounts of the past should we believe? On what grounds? With what reservations?” In this sense, naïve historical thinkers are more likely to take for granted previous historical accounts so that they do not usually call into question the truthfulness of historical facts and do not search for alternative evidence (Limón & Carretero, 1999). In contrast, historians recognise that facts themselves do not constitute a historical narrative, but that they are embedded as part of a particular version of the way historical events took place. Similarly, Wertsch

(2002) has discussed how historical narratives are sites for the formation of national identities, and as such they are subject to revision in relation to the political agendas they serve. Thus, although this might be an ambitious goal in primary schools, this aspect can not be overlooked in the teaching of History (Fines, 1994).

9.2.3 Continuity and Change

According to Pluckrose (1991), continuity and change are central to the understanding of how social processes, material artefacts, and lifestyles have been transformed over the years, and why they have the shape they have nowadays. In this respect, Seixas (1996) proposes that in order to learn how to analyse change it is important to select a transhistorical category, such as 'transportation', so that it can be traced and compared across different historical periods identifying the transformations and the causes underlying these processes. This ability is also linked to the understanding of chronology, as a structured way to organise events in a timeline at an individual, social and societal levels. In this respect, Pluckrose (ibid.) reports that historical time is better understood by students if it is related to a personal dimension; thus, efforts in developing this type of understanding in pupils need to be grounded on the way they organise personal events taking place in time.

9.2.4 Historical Agency

This characteristic entails the capacity of understanding causation in historical contexts, particularly in relation to issues of power and control (Seixas, 1996). According to Pluckrose (1991) pupils need to develop the capacity to generate evaluations based on moral values as well as to distance from their current circumstances and assess other situations based on their specific conditions of production. In this respect, there has been a considerable debate in relation to whether students are able to develop this type of processes, which Piaget (e.g. 1977) placed around the age of 8. Nevertheless, it has

been demonstrated that students can be sensible to the evaluation of historical facts if these are associated to similar contemporary issues that students usually see presented in the media and in their everyday contact with their community (Cooper, 1994). Similarly, some authors have suggested that the understanding of historical agency is related to the development of historical empathy, as this involves the ability to take the perspective of historical characters and peoples, evaluating the reasons they had for acting in a given way as if pupils were such characters or as if they were living in previous times (Pluckrose, 1991; Seixas, 1996).

9.2.5 Communicating History

The use of language linked to History as a discipline has multiple aspects to be considered. First, historical narratives are constructed by means of language (e.g. Wertsch, 1998, 2002), which represent a discourse embedded in institutional and political agendas (e.g. Foucault, 1965; 1966, see also my discussion of discourse from a Foucauldian perspective in section 4.16.1). In this respect, children need to appropriate historical narratives, but also they need to be able to challenge and transform these narratives based on alternative academically informed perspectives. In addition, pupils need to understand the specific vocabulary that is being used to discursively construct historical concepts, as well as to identify how they are being used as part of a given narrative.

Second, communicating History is an end by itself. On the one hand, students need to be able to discuss History in small-group discussions and in teacher-led plenary sessions. This means that children need the elements to participate in this kind of conversations which involve their engagement in communicative practices where participants make relevant historical issues in relation to succession and change, evaluation of evidence, and accountability of participation of characters in past events

(e.g. Middleton, 2002). That is, from a rhetorical point of view, this implies their ability for organising and using historical categories in specific communicative events, so that their relevance is interactionally accomplished and argued through talk.

On the other hand, communicating History also implies the ability of writing in ways that are academically valued in schools. This involves the need for students to identify the relevant academic writing genres that are used in History as a discipline, and as they are required to be used according to their school level. For instance, following a SFL perspective (e.g. see my discussion of this approach in section 4.1.4), Coffin (2000) has argued that the use of written language in History can be characterised as pursuing four main social purposes: a) chronicling, b) reporting, c) explaining, and d) arguing. The resulting genres realising these purposes can be classified as follows:

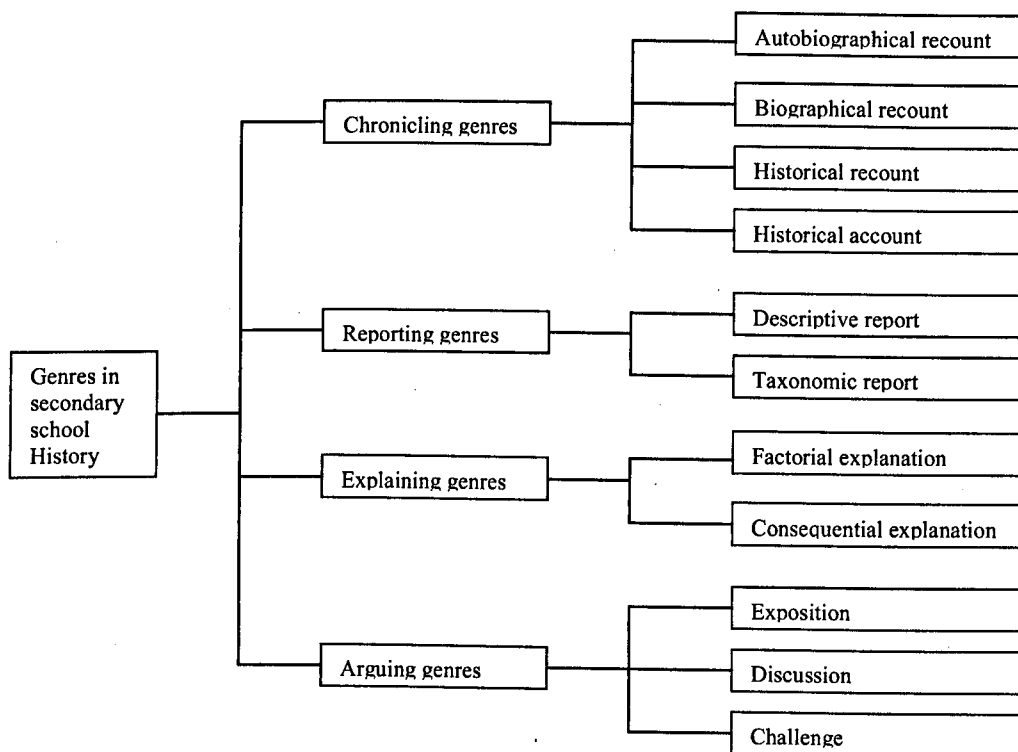


Figure 9.1. Key writing genres in secondary school History. Adapted from Coffin (2000) p. 143.

In turn, each genre is characterised by the existence of certain moves, and a specific register and lexicogrammar. For instance, the genre of 'discussion' implies the moves of 'statement of a background', 'description of an issue', the 'arguments or perspectives in favour and against the issue', and the 'establishment of a position'. In addition, this genre includes the use of certain grammatical structures implying social valuation, appearance and graduation.

In a similar way, using this SFL perspective based on the documentation of genres, Unsworth (2001) has applied this scheme to the teaching of design of multimodal electronic documents in secondary schools in Australia. Despite his clear pedagogical framework and the description of how it was implemented in classrooms, he does not report on the actual events and practices developed by Australian children participating in this programme, and the results are limited to the analysis of the visual semiotic design of some multimedia presentations they produced. As a result, more evidence is required to document how the actual practice of constructing multimodal electronic documents is carried out in specific literacy events in order to understand how participants construct categories in curricular domains. Accordingly, the use of language by pupils in my study, as part of the literacy practice of constructing WebPages in History involves the investigation of a) the appropriation, mastery, and evaluation of historical concepts and narratives, b) the discussion of historical categories in conversation in small groups, and c) the design of WebPages acknowledging the existence of genres that are valued for academic purposes, either reproducing or transforming them. Hence, in order to show how the historical categories constructed by participants can be assessed in relation to these aspects, next I will present an analysis of the curricular goals that students were supposed to fulfil according to the description of the National Curriculum in the UK, and the planning that Miss Clementine did for the unit of "the Victorians in Britain".

9.3 The Victorians in the National Curriculum in the UK

According to the National Curriculum (Department for Education and Employment & Qualifications and Curriculum Authority, 1999):

During key stage 2 pupils learn about significant people, events and places from both the recent and more distant past. They learn about change and continuity in their own area, in Britain and in other parts of the world. They look at history in a variety of ways, for example from political, economic, technological and scientific, social, religious, cultural or aesthetic perspectives. They use different sources of information to help them investigate the past both in depth and in overview, using dates and historical vocabulary to describe events, people and developments. They also learn that the past can be represented and interpreted in different ways.

In particular, in relation to historical interpretation, the National Curriculum establishes that:

People represent and interpret the past in many different ways, including: in pictures, plays, films, reconstructions, museum displays, and fictional and nonfiction accounts. Interpretations reflect the circumstances in which they are made, the available evidence, and the intentions of those who make them (for example, writers, archaeologists, historians, filmmakers).

Also, the National Curriculum establishes that pupils should be taught to “communicate their knowledge and understanding of History in a variety of ways [for example, drawing, writing, by using ICT]”. More specifically, in relation to speaking, pupils are required:

- 1) To speak with confidence in a range of contexts, adapting their speech for a range of purposes and audiences.
 - a) use vocabulary and syntax that enables them to communicate more complex meanings

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b) gain and maintain the interest and response of different audiences [for example, by exaggeration, humour, varying pace and using persuasive language to achieve particular effects.]

c) choose material that is relevant to the topic and to the listeners

And in relation to writing, they are required to:

a) choose form and content to suit a particular purpose [for example, notes to read or organise thinking, plans for action, poetry for pleasure.]

b) broaden their vocabulary and use it in inventive ways

c) use language and style that are appropriate to the reader

d) use and adapt the features of a form of writing, drawing on their reading

Finally, in relation to the topic of study used in this project, the teacher had selected the theme of “Victorian Britain”, which according to the National Curriculum implies “a study of the impact of significant individuals in work and transport on the lives of men, women and children from different sections of society”. Following this general aims set out in the National Curriculum, Miss Clementine chose to work on the specific objective of “to find out about the schools Victorian children went to and how they spent their spare time”. In addition, she set out the following “literacy links and opportunities for extended writing”:

Writing in a variety of forms

Writing factual accounts

Reading / interpreting information

Speaking & listening – discussion. Explaining thoughts and ideas orally.

Taking into account the goals that children were suppose to achieve during their involvement in their History class as well as participating in the sessions for constructing their WebPages, I found that the main categories students invoked and used in relation to the activity frame of History were: a) rich and poor, b) inventions, and c) famous characters. However, given the lack of space in this dissertation, I only report about a) rich and poor, and c) famous characters.

9.3.1 Rich and poor

The analysis of the paragraphs written on the WebPages provides evidence of how important was for children to talk about the lifestyle of Victorian people. In particular, children were interested in emphasising how different were lifestyles for rich and poor people at that time.

9.3.1.1 Written Paragraphs

For instance, in their WebPage about Victorian leisure activities, Annie, Nancy, and Jake wrote: *"Free time differed for rich and poor. The rich would have lots of money to buy lots of toys and clothes. They would have big nurserys. Poor people would have little toys and would not have big nurserys"*. In this respect, they emphasised how money afforded the possibility of possessing objects (e.g. toys and clothes) and access to settings (e.g. nurseries) that made an important difference about how free time was used by rich and poor people.

Similarly, Jordi, Carlota, and Albert wrote in their WebPages: *"In the Victorian times leisure time was important. It was very different if you were ritch or poor. The ladies in there spare time played tennis. When children had spare time if they were lucky they watched puppet shows, rode bicks. poor children in victorian times didn't have time to play because they had to work for money doing jobs like flower seller, chimney sweeper. If poor children didn't do the chimney than there feet got burnt."* In this sense,

this group of children not only mentioned the differences between rich and poor in terms of possessions, but also in terms of activities: (e.g. playing tennis, watching puppet shows and riding bikes vs. selling flowers and cleaning chimneys). The account of these differences is also dramatised by pointing out the punishments that poor children could receive if they did not act according to their social class roles and occupation (e.g. getting their feet burnt).

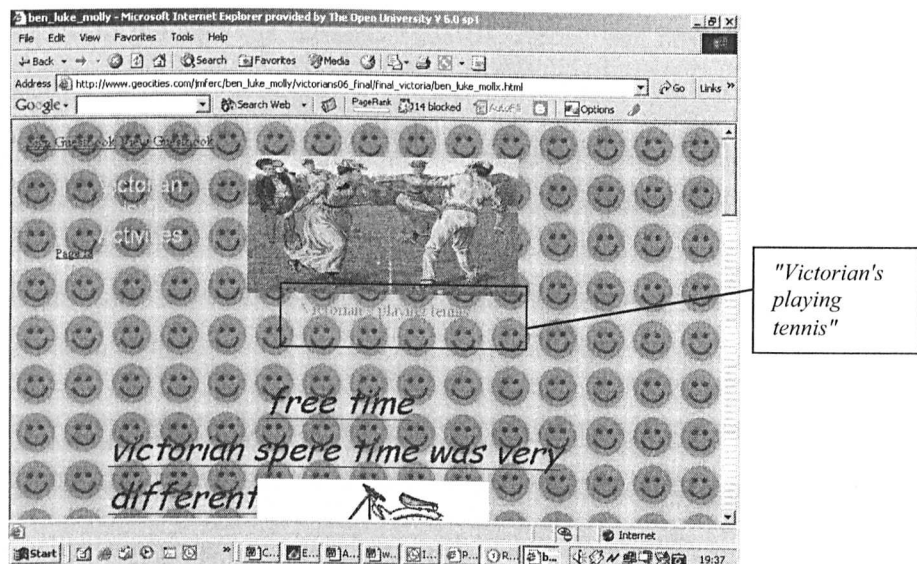
For the children in this study, differences between rich and poor were not only evident in relation to the way people spent their free time, but also in the way houses were managed and the type of families living in them. For instance, Claire, Kieran, and Zahir wrote, *"The people with a lot of money had people working for them. The people who are poor had ragged houses"*. Similarly, for Raoul, Jordi and Sarah being rich or poor mattered when writing about families: *"families are important to vitorian life. especilly for rich who also employed like annurse gardener boy foot man house maid and about sevrel children. families were often large like 18 to 20 people poor people didn't have a very good lives"*. Several issues can be highlighted from these paragraphs, such as the fact that servants were an important aspect of how Victorians lived (e.g. people with a lot money had other people working for them such as nurses, gardeners, etc.). Thus, being a master or a servant therefore mattered so that *"people who are poor had ragged houses"* and *"poor people didn't have a very good lives"*.

The way children presented the lifestyle of Victorian people was part of the genre of 'descriptive report', which is characterised by giving information about the way things were, comprising the moves of 'identification' and 'description' of affairs in a given historical period (Unsworth, 2001, p. 124). Mostly, children's descriptions represent a reproduction of the information they were given in classrooms, and/or obtained in

textbooks without showing evidence of transformation or assessment of the historical facts they were required to master as part of the curriculum.

9.3.1.2 Images

Children did not only refer to the category of 'rich and poor' when writing paragraphs. They also used pictures and captions to describe how money determined the affordability of possessions and access to activities. In this respect, there were seven pictures representing people engaged in leisure activities, and all of them portrayed people dressed in luxurious clothes, playing with dolls, tennis, or billiard, or on holiday sites. None of these represented rich people working, or poor people having fun. On the one hand, this could be due to the lack of images suitable for this purpose on the library of images provided in SiteCentral. However, on the other, it is interesting to note how there was only one picture with a caption used within this category, and this caption was a general statement about who were the people playing in it, e.g. *"Victorian's playing tennis"*, identifying a group of rich people dressed in nice clothes, as if 'Victorian', 'rich', and 'leisure' were equivalent:



This is relevant because it confirms that historical resources used as cultural tools

determine how agents should consume them in accordance to official versions (Wertsch, 2002). In this case, in the library of images children had access to other images representing poor or ragged people. Nevertheless, I would suggest that they did not choose them as examples of 'Victorian people having fun' because this would contravene the official historical narrative communicated at this school level in which 'rich people enjoyed their lives and poor people worked for them'. According to Wertsch (ibid.), in order to include some information in a well-configured story, one is forced to neglect other information that is clearly available and indeed might be included as part of another narrative account. In the case of the images available for the children, to make a different selection of them would have involved the creation of a different narrative in which 'rich people also work, and poor people are creative enough to generate spaces in which they also had fun'.

9.3.1.3 Interviews

Analysing the interviews, pupils also emphasised the differences between rich and poor people in the way they spent their leisure time. For instance, when asked about the message that they were trying to communicate with their WebPage they mentioned:

1. Manuel: what do you think is the message that you are trying to communicate to other children with this WebPage around the world?
2. Nancy: that poor people would have less, less toys than the rich people would have, and the rich people would be lucky that they had more toys than people would have.
3. Manuel: ok, ok,
4. Annie: that we should be happy that we have lots and lots of toys because some people only have one or two toys

In turn 1, I am trying to enquire about the topic embedded in the message they are *"trying to communicate to other children with this WebPage around the world"*. Nancy's response in turn 2 reveals a clear historical interpretation invoking a historical

narrative with clear-cut distinctions between rich and poor people: *“poor people would have less, less toys than the rich people would have”*. Moreover, it is interesting to see where she locates the origin of such differences when she mentions, *“rich people would be lucky that they had more toys than people would have”*. In this sense, I would suggest that the word “lucky” implies interpreting historical causation in terms of the random chances one can have to belong to one social group or the other, as if they were not related to any societal conditions producing a division of social classes.

In turn 3, by saying *“ok, ok”*, I am indicating that I am listening to Nancy’s reply, which is then further elaborated by Annie in turn 4. In her intervention, Annie makes a moral assessment of their present circumstances, on the light of what Nancy has just mentioned: *“that we should be happy that we have lots and lots of toys because some people only have one or two toys”*. In this case, I would argue that the word “happy” used in this context invokes the same type of ‘alignment’ to the historical narrative Nancy was referring to in turn 2. As well as with the word “lucky”, the word “happy” implies that there is a certain ‘destiny’ in which people are born with certain economical conditions inherent to a given social group, and as such it is interpreted with conformity: *“we should be happy”*.

9.3.1.4 Communicative Events

When analysing communicative events, I found that children were more likely to get engaged in discussions referring to this category in events corresponding to the exploration or evaluation of different elements in their WebPages. For instance, the following extract presents a conversation between Claire, Kieran, and Zahir while they were choosing and exploring several links in the sample WebPage about Victorian schools:

Transcript 9.1. Victorian Schools



1. Claire: Right. There's workhouse, or do you want to go to...
2. Kieran: Let's shift places (Kieran stands up and shift his place with Zahir).
3. Claire: On proprietary, school, I think they'll be like rich people where they go, they have, a father and a mother.
4. Zahir: You could choose this one.
5. Claire: Public schools or (Kieran and Zahir moving their fingers on the screen).
6. Kieran: Sunday schools (Zahir clicks).
7. Claire: That, that (pointing on dame schools, Zahir clicks).

In the previous transcript, children are deciding what link to visit from the different varieties of schools existing in Victorian times. They mention several links such as workhouse, proprietary, public, Sunday and dame schools, so that they can read a brief definition of the aim of each of these schools and the type of children and teachers attending and running them. In this transcript they nominate different options to read, and only in the case of proprietary schools there is a hypothesis about the kind of information that could be found about this school if they followed this link, when Claire mentions in turn 3: *"I think they'll be like rich people where they go, they have, a father*

and a mother". Thus, Claire makes a prediction about the type of children attending these schools, which invokes again how different lifestyles were in Victorian times depending on the social class, in this case the type of school that they could attend⁷.

It is worthy of note how Claire was right in her hypothesis about the characteristics of this type of school, as the link of this page describes proprietary schools in the following terms: *"These schools were set up by local businessmen in industrial towns. The boys learned things like book-keeping and arithmetic, French and geography. These would be useful when they went to work in local business"*. In this respect, we could say that Claire 'knew' already what they were going to find, as if this knowledge were stored in her mind somehow. However, according to a sociocultural perspective it would be more adequate to say that her prediction could be interpreted as evidence that Claire has mastered and/or appropriated this aspect of the historical narrative of the Victorians, as a cultural tool that is made relevant in this communicative event. Thus, this brief invocation of the category of rich and poor lifestyles is made in practice, in this case, in deciding which link to read.

9.3.2 Famous Characters

This category refers to the references of children to issues such as important dates, family, actions, and hobbies, in the life of famous Victorian characters.

9.3.2.1 Written Paragraphs

When analysing the written paragraphs in the WebPages, I found that biographies tended to follow a chronological sequence, where certain important dates were highlighted. Thus, children mentioned the date and conditions of birth of the character

⁷ It is interesting how she makes the link between "rich" and the fact that *"they have a mother and a father"*. Rupert Wegerif has suggested to me that within the context of the usual family structure in Milton Keynes, in which divorces are quite common, children might interpret the fact of having a family as being rich. This is a claim that of course would require the gathering of further evidence. In any case, the link being made by Chloe is still revealing situated in a Victorian context.

studied in six of the cases (25%), the date of death in another six (25%), and the date of important actions and inventions in 12 biographies (50%). In addition, each of these dates included specific associated details, which reveal to some extent the personal interest of the pupils in this respect. For instance, Ally and Jackie wrote, *"He [Charles Dickens] was born on the 7th of Febuary 1812 in Landport (which is a district of Portsmouth)."*, and Claire, Kieran and Zahir wrote, *"He [Alex G. Bell] was born in 1847 at south chorlotte street in Scotland"*. In both cases, children were interested in presenting specific information about the place, such as the district and even the street, where these characters were born. Similarly, in terms of famous actions, children described general public details such as when Basil, Lee, and Monica wrote, *"Queen Victoria was just 18 when she began her reign in 1837"*.

Moreover, they also wrote about other more intimate details of their characters. In the case of Queen Victoria, Tanya and Phillip wrote, *"[in] 1840 she came wore serious"*, and Annie, Nancy and Jake wrote about Florence Nightingale: *"When Florence was 16 in the gardens of Lea Hurst she belived she heard a call from God asking her to do special work. Florence didn't know what the special work was, but she knew that she had to try to find a way to be useful. Florence kept Gods message a secret because she did not think that anyone would understand"*. Thus, children were not only describing the public aspect of the life of famous Victorian characters but also they were interested in showing very intimate details about their changes of mood or even mystical experiences following the voice of God.

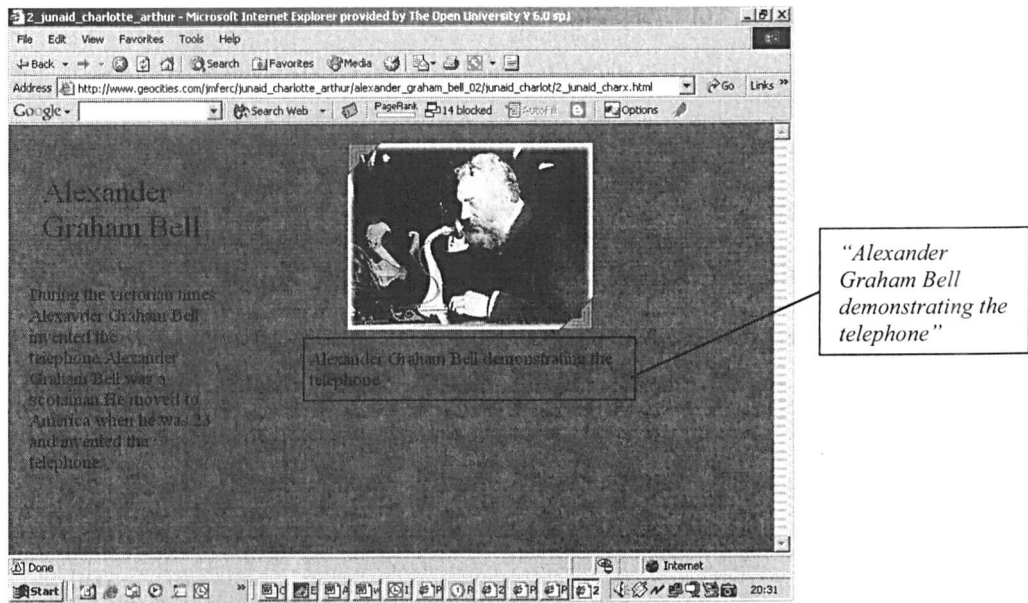
Finally, children also chose to describe the families of Victorian characters such as Queen Victoria: *"Queen Victoria was just 18 when she began her reign in 1837. Three years later she married coisn prince Albert. QUeen victoria had nine cildren annd a husband prince albert. She died iN 1901"*. In this case, Basil, Lee, and Monica wrote

about the number of children she had, and the relationship with her husband as a cousin. Another favourite aspect of the children to describe was how these characters were named and in this case, Ally and Jackie wrote, *"His full name was Charles John Huffam Dickens"*. Also, Annie, Nancy, and Jake wrote, *"Florence Nightingale was born in Italy on the 12th of May 1820, her mother & father named her after the city in which she was born. In those days it was unusual to name a baby after a city but both Florence & her sister were named after the city in which they were born"*. Once again, apart from the famous actions and contributions of these characters to History that were also reported, children were also interested in talking about other more private and personal aspects that they found while doing their WebPages.

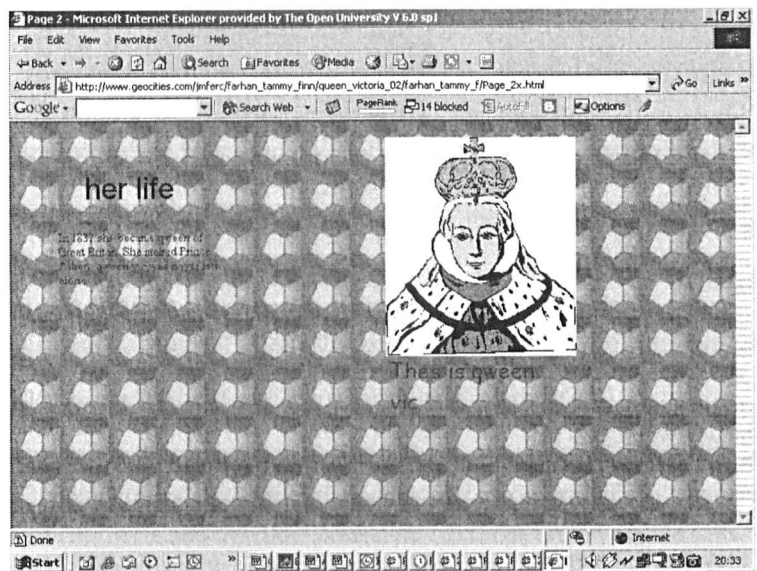
The way children included specific writing moves in their biographies as discussed before, matches with the description of the genre of 'biographical recount' (Unsworth, 2001, p. 124), including the obligatory moves of 'background' and 'record of events'. However, the biographies produced by the children did not include the optional move of 'evaluation of person', which I would argue would have been important for the children to include in order to demonstrate that they were capable of assessing the significance of the characters in their own historical time as well as their impact in shaping the present living conditions.

9.3.2.2 Images

In total, I found seven images about Victorian characters in their WebPages. Three of them were photographs in black and white. One of the photographs presents Florence Nightingale dressed in nurse uniform, the second shows an old age Queen Victoria dressed in black, and the last one is about Alexander Graham Bell next to a telephone, with the legend *"Alexander Graham Bell demonstrating the telephone"*.

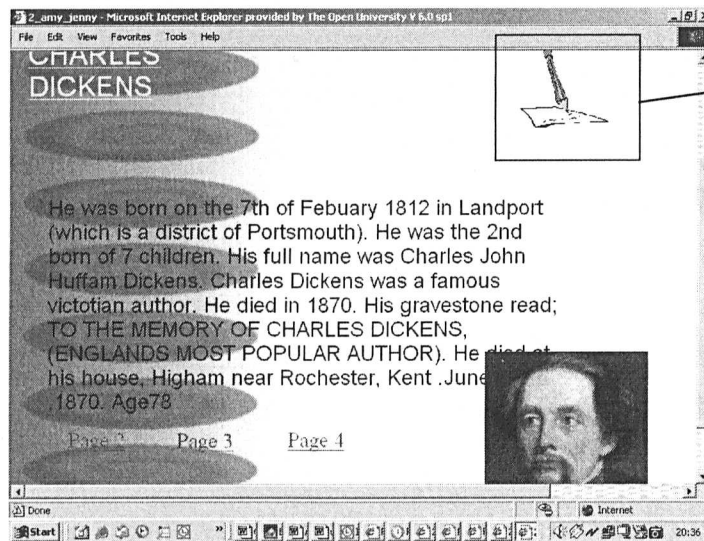


Three of the images were paintings, two famous portraits of young Queen Victoria (in display at the British National Gallery), and one about Charles Dickens. Finally, there is a clipart drawing of a queen with the legend: *"Thes is qween vic"*.



It is worth noting how although students tried to present a personal and intimate account of all these characters in the written paragraphs, when these characters were depicted by images they were all represented with features that invested them in the historical role

they played. Thus, captions, the clothes they were dressing and the artefacts these characters were photographed with, indicated their historical roles. Thus, children used images as clear symbols of the fame, prestige, and institutional roles that all these characters played as an indissoluble aspect of their personalities. This design strategy is particularly evident as intentional in the case of the painting of Charles Dickens, who is represented in a close up portrait of his face placed next to the description of his life.



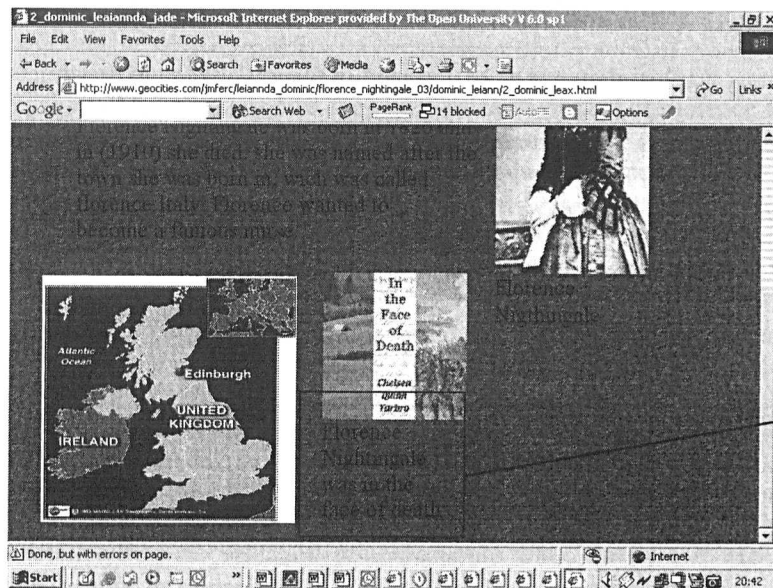
Clipart of a pencil writing in paper

In this case, the historical role of this character as represented in this portrait is not very evident (e.g. it could be the portrait of any person), so that it is further supported by a clipart drawing of a pencil writing in white paper, as if this was needed as a reminder of Charles Dickens' role of writer given that nothing else in the portrait indicates this.

9.3.2.3 Interviews

In the interviews, children showed how they interpreted the features of the famous characters they were presenting:

1. Manuel: shall we have a look to that one then?



8. Dave: that's, that's, that's where, that's where it was the hospital and this is, because here, if you go down it says, it says there, "in the face of death", and it says up here "Florence Nightingale was in the face of death" because she almost died because an aeroplane.
9. Jacqueline: because she saved lives, because the wars were going on in that time.
10. Manuel: what else did you write in the other pages?
11. Jacqueline: well we writ' when she born and when she died, and we writ how she was named; like she was named after her town like Florence Italy
12. Dave: Florence was named Italy, and Italy was named Florence.
13. Jacqueline: and we've got a picture of her there.
14. Dave: that the picture what I've got on mine and on the second and, one, the third one it's like, it's like, it's like, um
15. Jacqueline: the pictures gone all red
16. Dave: [because, because it was about her hobbies
17. Louise: [want to save the world from danger and make sure nobody dies

In turn 8, it is interesting the prominence of deictic terms in Dave's intervention (e.g. *"that's"*, *"that's where"*, *"if you go down"*, *"it says there"*, etc.) indexing the way in which various graphic elements were arranged in their WebPage to construct meaning. In particular, he refers to a picture of a book titled *"In the Face of Death"* and a caption where they wrote, *"Florence Nightingale was in the face of death"*. Dave explains that they decided to use these elements *"because she almost died because an aeroplane"*. Thus, by using the combination of caption and the book cover, I would suggest that Dave is making relevant in his intervention the idea of 'fragility of life', implying how life can suddenly end by means of an accident. Similarly, elaborating on this, in turn 9, Jacqueline adds *"she saved lives, because the wars were going on in that time"*. Hence, given the context provided by Dave's previous utterance, I would suggest that Jacqueline is making the point of the 'irony' that Florence was saving lives while at the same time she was about to lose her own life in an accident.

In turn 10, I tried to probe more about the message they were trying to communicate by asking them *"what else did you write in the other pages?"*. So, in turn 11, Jacqueline describes the moves they followed in their paragraph: *"well we writ' when she born and when she died, and we writ how she was named; like she was named after her town like Florence Italy"*. Next, in turn 12 it is worth noting the way Dave plays with Jacqueline's previous utterance saying: *"Florence was named Italy, and Italy was named Florence"*, as this is a dispreferred response that seems not related to Jacqueline's explanation about the structure of their paragraph. In this respect, on the one hand, this language game can be interpreted phonetically, as if Dave was simply playing with the repetition of the last two words uttered by Jacqueline. On the other hand, I would argue that the circularity embedded in the way the two words are being linked also recalls the circular relationship between saving lives and the need of being saved that Dave and Jacqueline were collaboratively constructing in turns 8 and 9, so

that the names of a person, a city, and a country are also ‘ironically’ intertwined, and thus are implicitly assessed on those grounds by Dave in this language game.

In turn 13, Jacqueline mentions how they have placed a picture of Florence in the page. In turn 14, Dave seems to be struggling to elaborate on this respect, as if he was trying to explain why they chose this picture when he says, *“the third one it's like, it's like, it's like, um”*. In turn 15, Jacqueline does not elaborate on Dave's turn, and instead points out the fact that *“the pictures gone all red”*, a technical hue effect that the pictures took when they were dragged from the clipart gallery and dropped in the background of their WebPage. However, in turn 16, Dave seems to be able to complete his explanation when he implies that the selection of that picture was *“because it was about her hobbies”*. Yet, in turn 17 Louise states that she *“want[s] to save the world from danger and make sure nobody dies”*. This utterance contrasts with the explanation Dave is offering, so that the choice of the picture for Louise was not based on Florence's hobbies, but on the ‘mission’ she set for herself. I would suggest that Louise's utterance once more recalls the issue of ‘fragility of life’ that was discussed in turns 8 and 9 by Dave and Jacqueline. By doing this, she is characterising Florence Nightingale as a sort of heroine who *“want[s] to save the world from danger and make sure nobody dies”*, and invoking again the ‘irony’ of heroines wanting to save the world from danger and making sure nobody dies, when Florence herself was “in the face of death”.

9.3.2.4 Communicative Events

Communicative events also revealed that students had a clear idea of famous characters in Victorian times. For instance, Annie, Nancy, and Jake are writing about Florence Nightingale:

1. Nancy: (reading) “Florence Nightingale was born [in 1820

2. Annie: [in 1820 in Italy. No, "Florence Nightingale was born in Italy on the 12th of May of 1820. Her mother and father named her after the town where she was born." Then, we write "her father and mother were William Edwards and Frances Nightingale".
3. Nancy: yeah.
4. Jake: yeah.
5. Annie: And don't say that her mother and father were Fanny Nightingale
6. Nancy: They were
7. Annie: They weren't
8. Nancy: Her mom was called Fanny
9. Annie: Sorry
10. Jake: That's her proper name.
11. Annie: That's her nickname. Fanny's the nick name, Frances is the real name
12. Nancy: Oh, I can call my mum Frances, Fanny now.
13. Annie: So... (starts typing)

The transcript presents Nancy in turn 1 reading aloud what they have written so far in their WebPages and then in turn 2, Annie joins the reading so that when she finishes she mentions that they can write "*her father and mother were William Edwards and Frances Nightingale*". Following Annie's proposal, in turns 3 and 4 both Nancy and Jake agree on this, and in turn 5 a discussion starts about the name of Florence's mother, in which Annie warns not to say that the name was "*Fanny Nightingale*". It is interesting how Annie introduces the topic in turn 5 as a dispreferred move, given that they have already agreed on the names of Florence's parents in turn 2. Therefore, I would argue that Annie introduces this issue as if she was 'designing' a discussion to reveal her knowledge. Thus, from turns 6 to 9 Annie and Nancy continue the discussion without any backing evidence, just disagreeing with each other, and in the way she uses the word "sorry" in turn 9 seems to be cueing that this is an apology for the 'designed

dispute' in which Nancy is revealing her lack of knowledge. In addition, in turn 10 Jake gets engaged in the dispute: *"that's [Fanny] her proper name"*. By doing this, he has provided the perfect opportunity that Annie seemed to be trying to construct when she proclaims: *"That's her nickname. Fanny's the nick name, Frances is the real name"*. Annie's position of knowledgeable person is even more elegantly achieved when Nancy realizes that she can start calling her own mother "Frances", "Fanny", something that Annie had the opportunity to reveal to Nancy.

Therefore, the transcript is interesting in two respects. First, the kind of issues pupils are dealing with while writing about Florence Nightingale is completely part of their personal agenda. That is, the transcript reveals the kind of interests that they have in mind as part of their engagement with this activity: specific intimate details and clarification of information that they may feel is privileged and valuable such as the real name of Florence's mother. Secondly, by initiating this discussion in turn 5, Annie positions herself as somebody that knows something that the others may not know. Consequently, she takes her time to reveal it, until in turn 11 she provides the solution to this riddle by clarifying the relationship between the two names being discussed: they represent two forms of the same name. I discussed in sections 4.1.3.3 and 4.1.6.1 how subject positions are afforded by the use of cultural tools and knowledge, and how power is inherent to these positions as knowledge is invoked in discourse. I would suggest that this is an example where these issues are made evident with Annie's management of the conversation.

9.4 Conclusion of the Activity Frame of History

I have shown in this section several instances in which categories in relation to the activity frame of History have been invoked and made relevant by participants in communicative events, interviews, concept maps, written paragraphs and images in

WebPages. Thus, I would argue that these categories represent the ways in which participants used cultural tools to achieve specific goals related to the management of History as a curricular subject. This collection of instances of 'rich and poor', 'inventions', and 'famous characters' were constructed as part of a 'situated activity system' (Goodwin, 1997; Säljö, 1995) where a set of cultural tools (listed in section 5.3), mediated in the collective construction of WebPages by the participants.

From this set of cultural tools, the elaboration of concept maps allowed the children to construct their WebPages by elaborating a diagram representing a network of information that afforded the identification of key historical concepts in relation to the famous characters and inventions they were investigating⁸. Associated with this material artefact, there were two other psychological tools that were made relevant within this activity frame: the heuristic for constructing branches, and the use of historical narratives. In relation to the heuristic for constructing branches and linked concepts, the teacher had asked them to create branches following the use of a set of key questions such as 'who?', 'when?', 'where?', 'why?' and 'what?' and associated responses about their Victorian character. Thus, this heuristic determined the content and design of the

⁸ In relation to the analysis of the concept maps, it was possible to identify several specialised branches about inventions. For instance, Chloe, Kyle and Zain in their concept map about George Stevenson included several branches asking, for instance *"what Did he Invent?"*, and a child branch answering *"Telephone"*. Another branch was asking, *"Did he invent anything else?"*, and a child branch was answering, *"Yes he did he Invented 4 thing they were photophone, graphophone and a respirab"*. Similarly, Junhir, Carlota, and Albert in his concept map about Alexander Graham Bell had a branch called *"inventions"* with four sub-branches with the questions *"why?"*, *"what?"*, *"how?"*, *"when?"*, and a sub-branch coming out from *"why?"* answering *"He invented telephones to help deaf children"*. In the same way Rueben, Jordan and Sarah in their WebPage about George Stevenson also had a branch called *"Inventions"* with the same 4 sub-branches as the previous group: the questions *"when?"*, *"why?"*, *"how?"*, *"what?"*, and with the answers of *"1829-1859"* and *"because someone else was doing it"* in relation to the first two questions. Finally, Annie Nancy and Jake in their concept map about Florence Nightingale had a branch called *"inventions"*, and a sub-branch stating *"How to wash."* Finally, for the concept map of Amy and Jackie, they had a branch with the question *"what books did he write?"* and two sub-branches with the title of his books *"Oliver Twist"* and *"Scrooge"*. All of these instances reflect an interest on the main inventions of Victorian times, not only as cold mechanical artefacts, but also as embedded in a human context, with personal agendas, such as Alexander Graham Bell inventing telephones to help deaf children and George Stevenson inventing a train to compete with somebody else that was doing it as well.

concept map, in a similar fashion in which informed the writing of their 'introductory paragraphs' as I discussed in section 6.2.2.

With regard to the historical narratives as the second psychological tool considered in this discussion, the categories identified in the different instances of this activity frame provided an illustration of a wide range of ways to appropriate them that go from a rigid cultural determination to a more creative interpretation of them. For instance, children consumed these narratives more closely to an official version such as when they wrote about the differences between rich and poor people in Victorian times, reproducing what they were told in class and read in text books. Also, they were close to an official historical narrative when they represented leisure activities with pictures showing only rich people.

However, I also presented instances where children placed particular interest in details that depicted Victorian characters as humans, that although invested in a historical role, they had a private and intimate life as well. For instance, the pupils mentioned how George Stevenson was a competitive person designing the train just because someone else was doing it, Alexander Graham Bell was originally interested in deaf children, and Charles Dickens wrote about clerks, as he himself worked as a clerk. Similarly, they wrote about the queen as someone who changed her mood abruptly becoming more serious, and Florence Nightingale was strangely named after the city where she was born and being a religious woman who followed the voice of god to help humankind. Nonetheless, despite the interest in personal details, they did not seem to get engaged in a proper evaluative process of the impact of these characters in present living conditions. For instance, in the interviews and communicative events there were cues that indicated that children might be engaged in a process of evaluation of characters,

although discussions in relation to the significance of events were not fully explicit in their conversations.

In conclusion, the categories constructed by the children with regard to the activity frame of History expressed that Victorian times were marked by contrasting differences in social classes; it mattered whether you were rich or poor, more than in these days. However, Victorian times were also an exciting period with lots of inventions and important people that changed forever the way people live nowadays. Nevertheless, more elaboration was required in the way children assessed these issues.

CHAPTER 10. THE ACTIVITY FRAME OF GROUP WORK

10.1 Group Work as Co-Construction

Throughout the dissertation, I have been discussing issues that involve the analysis of social interaction in small-group activities, drawing on concepts such as the ZPD (section 3.2.1), 'scaffolding' (section 3.2.2), IDZ (section 3.2.3), exploratory talk (section 3.2.4) and collaborative writing (section 3.3). In addition, in Chapter 4 I reviewed extensively the ways in which language use in social interaction can be analysed, drawing on different approaches of sociolinguistics and discourse analysis. Therefore, in this section, I will only elaborate on this discussion in relation to the concept of 'co-construction' (introduced originally in section 4.1.7.2), as a general construct which, I would argue, subsumes many of the features that are considered in the literature about the study of work in groups.

On the one hand, the concept of co-construction has been used following a 'sociocognitive' perspective. Its origins can be traced to the work of Perret-Clermont (1980) and Doise and Mugny (1984) in relation to the idea that knowledge is co-constructed in social interaction as a result of the negotiation of contrasting points of view that require to be solved as part of a 'sociocognitive conflict'. In this respect, knowledge is usually measured with psychometric tests in pre- and post- group-work conditions, and correlations are sought between the group-work style and the transformation of knowledge occurred in the process, measured in terms of 'cognitive change'. In this type of study, the debate is centred around the nature of conflict and cooperation (Kruger, 1993), as well as in the nature of 'transactions' in the way language is being used (Azmitia & Montgomery, 1993; Teasley, 1995, 1997), so that in general, group agreement and explanations for taking decisions are accounted as the

general features of effective group work for cognitive purposes (e.g. Howe, Tolmie, & Anderson, 1991; Howe, Tolmie, & Rodgers, 1992). However, the way language is treated in these studies has been criticised for not being constructivist enough, so that the protocol analyses employed to code utterances do not fully capture the relational nature of meaning construction that is inherent to social interaction (Roschelle, 1992).

On the other hand, following an ethnomethodological perspective, which informs analytical methods in CA, DA and IS (as I discussed in Chapter 4), researchers have looked at the process of co-construction of meaning in group work as a joint interactional accomplishment. In this respect, meaning is negotiated through talk and other non-verbal cues indexing the construction of categories, which are embedded in the situated and dialogical nature of social action (e.g. Goodwin, 1995; Mäkitalo & Säljö, 2002; Roschelle, 1992; Säljö, 1999). In addition, there is an interest in investigating the differential use of communicative, cognitive and material resources by participants, which result in a 'division of labour' inherent to any social encounter (e.g. Linell, 1998; Linell & Marková, 1993; Rommetveit, 1979c, 1979d; Wertsch, 1998). In other words, in any communicative event or collective practice, participants take on certain roles as an intrinsic way to carry out an activity, which implies a certain degree of asymmetry of participation rather than symmetry.

This way of conceptualising the co-construction of meaning is consistent with the strategy that I have adopted for the analysis of data in this study, investigating the view of participants about their involvement in the literacy practice of constructing WebPages, as I discussed in Chapter 7. In this manner, I have analysed the categories that participants constructed as part of the activity frames of 'design' and 'History', and next I will carry out the analysis in relation to the activity frame of 'group work'. In this respect, I will discuss to what extent the "Thinking Together Skills" (described in

section 5.3) mediated the construction of categories, analysing to what extent they were appropriated, mastered, and transformed as part of this activity frame. The main categories that I found regarding this frame were 'collaboration', 'empathy', and 'power knowledge'⁹.

10.1.1 Collaboration

This category refers to the references that children made about a shared focus on the task, a sense of having the same goal as a group, and participation in activities as doing a group effort.

10.1.1.1 Activity Cards

Analysing the responses to activity cards I found some references to the group work, conceptualised as a shared group activity. For instance, in the activity cards when they were asked to fill with information some fields such as *"We think our web page is... because"*, Annie, Nancy and Jake wrote: *"We think that we have tried hard on our web page... we have tried to put everything put together nicely"*. Similarly, Raoul, Jordi, and Sarah wrote down in this respect: *"[We think our web page is] fabulous because we put a lot of hard work in to it and made it look exiting.and intresting!!"* The references of these pupils to their group effort is one aspect of the category of collaboration, as they perceived their task as something that they did together, putting effort and hard work into the elaboration of their WebPages.

10.1.1.2 Interviews

In the interviews, children also referred to other aspects of collaboration. For instance, as well as in the activity cards, children referred to aspects of group effort, like in the following interview while we were looking at their WebPage:

⁹ Part of the analysis concerning this activity frame was presented in a poster in the CSCL Conference which took place in Bergen, Norway, 18-22 June, 2003. See Fernandez (2003c).

1. Manuel: so would you change anything else in this WebPage? Would you add something?
2. Claire: I dunno really
3. Manuel: how about you Kieran?
4. Zahir: me
5. Manuel: do you like it the way it is?
6. Kieran: what?
7. Manuel: do you like it the way it is? Would you leave it like this?
8. Zahir: I would
9. Claire: yeah, I think what we've done there is quite good so -people can understand how their lives were.

In the previous excerpt, as an interviewer I am trying to find out about the design strategies mediating the evaluation of their WebPage. In that respect, my approach seemed not too productive in getting the children talking about design matters, although it was useful to reveal some issues about the perception of their WebPage as a group product. Thus, it is interesting to note how after five different questions from my part, Claire interpret my interrogation as something that makes them accountable for a justified answer, so that she chose to defend their position based on her satisfaction for their own work as a group and the way their WebPage is communicating efficiently a message: e.g. 9. Claire: *"yeah, I think what we've done there is quite good so -people can understand how their lives were"*.

Later in the interview, while we were looking at the WebPage produced by another group of children, I tried a similar strategy to elicit a conversation about the design principles used by this other group of children for the WebPage. As part of this conversation, Claire, Kieran, and Zahir mentioned that they had suggested to the other group the need for changing both a background that was too bright, and a picture that they thought did not link with the topic. Afterwards I asked them:

1. Manuel: would you ask them to change something else?
2. Claire: no, I wouldn't, cos I think if we asked them to, they would think "why should we?", I think they tried really hard on it

Again, we can see Claire in turn 2 highlighting how important it is to respect the effort of a group as they were evaluating this other WebPage. In this sense, she seems to think about it just in terms of the effort the other group have put into their work (*"I think they tried really hard on it"*), and not in terms of the possible design improvements that they could put into practice. Thus, it is interesting how she uses reported speech (*"why should we?"*), which voices an imaginary thought of the other group of children, as a strategy to provide a justification to support her answer to my question.

Group work was also interpreted as a collaborative endeavour where individual information was put together into a group product:

1. Manuel: Louise, would you like, I mean, did you like working together, doing the WebPages, did you enjoy doing it?
2. Louise: Yes, cos everyone, one got lots of information in their head, so we got all the information and out it together in the paragraph.
3. Manuel: So, you would do it again.
4. Louise: Yeah.
5. Manuel: OK.

In the previous excerpt, the phrasing of Louise's response in turn 2 about the advantage of working together is worthy of note. First, it is important to see where she locates the origin of information: *"everyone, one got lots of information in their head"*, and how the way to collaborate is to get the information *"out it together in the paragraph"*. In this respect, the joy of group work is accounted by means of referring to a process in which internal ideas are externalised and combined in a written text. Accordingly, I would suggest that she is invoking an 'ideal' notion of group work in which conflicts and

differences are not mentioned as constitutive of the same process of 'adding individual information'. In contrast, I also found instances where children referred to problems in group work, identifying examples of lack of collaboration:

1. Manuel: OK. So, after working all this period of time doing the WebPage, would you rather work in groups or on your own?
2. Jackie: Well, we would work in groups cos it'll be easier, cos otherwise, if there was, if we worked alone it wouldn't be enough computers.
3. Ally: And also, I like working with Jackie.
4. Manuel: Ohh, that's very sweet. So, you prefer then to work in groups.
5. Ally: Yeah, but I'm not sure whether, erm, whether... I wouldn't like to be Claire because I find it hard to put up with Kieran on his own, and Zahir on his own, and Claire had to put up with Kieran and Zahir. // together.
6. Manuel: Yeah, so it depends a lot on who are you working with.
7. Ally: Yeah, cos I couldn't put up with Junhir.
8. Manuel: oooh.
9. Ally: cos he, he was so hard, not to get a little bit fuzz, cos all the time he was fiddle, fiddle, fiddle
10. Jackie: Yeah, he kept on pressing the keyboarding. He pressed the keys like that, with every single line
11. Ally: (....)
12. Manuel: OK. Did you enjoy doing WebPages?
13. Ally: [Yeah.
14. Jackie: [Yeah. Cos, erm. We. Me and Ally enjoy doing WebPages. We thought we were just gonna do writing on the WebPages.
15. Ally: Junhir didn't like it, cos otherwise he would've paid more attention all the time.

In this excerpt, it is possible to see how the children can fine-tune their conceptions about collaboration. Initially, in turn 2 Ally and Jackie think of collaboration as something that would facilitate their work: *"we would work in groups cos it'll be*

easier". Nevertheless, they also identify other more practical issues related to classroom management: *"if we worked alone it wouldn't be enough computers"*. In addition, they refer to issues of friendship, such as when Ally mentions in turn 3: *"And also, I like working with Jackie"*. Then, some matters of lack of collaboration start to emerge as well, as when Ally mentions in turn 5 how Claire had to put up with two children that Ally finds difficult to work with. This remark is extended in turn 7 to Junhir, a pupil that was working with Ally and Jackie at the beginning of the programme, and that was moved by the teacher to another group of children after the first few sessions. Ally and Jackie collaboratively provide evidence in turns 9 and 10 about how Junhir's behaviour was considered problematic in the sense that he was *"so hard"*, getting *"fuzz"*, fiddling *"all the time"*, and kept pressing the keyboard, *"with every single line"*. Finally, when Ally and Jackie were asked if they enjoyed doing WebPages, Ally answered that indeed they enjoyed it because they thought that they *"were just gonna do writing on the web pages"*, as if the use of other semiotic resources such as images and sounds added something valuable to their experience. Finally, in this respect, Ally concludes: *"Junhir didn't like it, cos otherwise he would've paid more attention all the time"*, therefore indicating a link between focus on task and enjoyment, as important aspects of collaboration.

The last excerpt I would like to present in order to identify what children had in mind as effective collaboration, or not, is a sequence with Raoul and Jordi being interviewed about their WebPage:

1. Manuel: OK. Is anything that you didn't enjoy by working in groups?
2. Jordi: Erm
3. Raoul: We didn't enjoy like how many... take turns of everything.
4. Jordi: Yeah.
5. Raoul: Cos Sarah did all like. Sarah did the reading and writing. Sarah did...

6. Jordi: And the mouse.
7. Raoul: Sarah turned...
8. Jordi: And she sit there.
9. Manuel: So, what did you do then?
10. Jordi: We sat there
11. Raoul: We just stared
12. Jordi: Cos we couldn't do anything.
13. Manuel: Oooh!
14. Raoul: and then, I said to Sarah: Can one of us do one thing each? But she said there's four things: that, that, that and that. And I said ooh, I thought we agreed I was going to do the writing.

In order to have a comprehensive approach to the different aspects of the literacy practice investigated, and trying to balance any acquiescence response bias (Breakwell, 2000), in the design of the protocol of the interviews with children and teacher I included pairs of negative and positive questions about the issues I was inquiring about. In this respect, when I had asked them whether they would work in groups again or not, these children had mentioned that they would work in groups *"because if you work on your own, it'll take ages"*, and *"I wouldn't be able to write properly."* Nevertheless, in the excerpt presented above, I was enquiring about aspects that they would not find positive about working in groups. In this sense, the answers they provide in relation to the clarity of their conceptions are quite revealing about what was inadequate with their experience of working together with Sarah. For instance, Raoul mentions in turn 3 that he did not enjoy to *"take turns of everything"*, an assertion that is supported by Jordi in turn 4. Then it is evident in turn 4 what the reason for this was, when Raoul mentions: *"Cos Sarah did all like. Sarah did the reading and writing. Sarah did..."* And from turn 6 to 8 Jordi and Raoul reports how she did the mouse, turned things, and probably took the 'best' seat, by the way they point to the middle seat in front of the computer when

he says "*and she sit there*". When asked what they did then, they answered in turns 10-12 that *they "just sat there"* and "*stared*" because they "*couldn't do anything*". In general, it is worth noting how Jordi and Raoul co-construct the assessment of their group work situation, elaborating on previous utterances, and completing each other turns so that it is very difficult to differentiate who owns the opinions that are being expressed.

To conclude the analysis of this excerpt, it is worth noting how Raoul uses reported speech to explain in turn 14 how he asked Sarah to divide the task: "*And I said to Sarah: Can one of us do one thing each?*", and how she replied that there were 4 tasks to do. Her response also implied at the same time that none of these tasks included the one she was actually doing, so that she would not give up the role of writer that Raoul wanted to take on, as Raoul reports that he replied to Sarah: "*And I said, ooh, I thought we agreed I was going to do the writing*". All these instances of reported speech, reveal how the voices of their participation in previous dialogues, and in particular the voice of Sarah (who is not present in the interview), are used by Raoul as evidence to assess the quality of their group work as part of the interview.

Hence, it is possible to see how on the one hand pupils valued collaboration as something that helped them to get things done faster and as a mechanism to support each other's weaknesses. That is, collaboration implied distributing the task and supporting each other. On the other hand, it is also possible to see how they recognise instances of group work where collaboration is obviously not taking place, such as when the tasks are not distributed, or when this distribution does not acknowledge the fact that tasks are intrinsically valued in different degrees. In this respect, cultural tools afford different tasks and subject positions to the agents using them, which are embedded in a social context of power and authority. In this case, the use of the

keyboard by Sarah afforded her a position of writer that is more valued than perhaps using the mouse, reading a text that has been prepared in advance, or just staring and doing nothing. Thus, pupils deal with power continually as an intrinsic aspect of the use of mediational means (Gee, 1999; Wertsch, 1998), that I will return to in section 10.1.3.

10.1.1.3 Communicative Events

To conclude the discussion of the category of collaboration, in this section I will use two communicative events to show how two different aspects of what it means to collaborate can be identified within the activity frame of group work. The next excerpt presents a group of children, Claire, Kieran and Zahir engaged in the writing of a paragraph for their WebPage:

Transcript 10.1. Oh, Men!

1. Zahir: My turn to write. Kieran, what you doing with the board?
2. Kieran: I'm cleaning the board, that's what I'm doing.
3. Zahir: No, you're supposed to write questions
4. (Claire comes back and knocks on Zahir's back trying to recover the middle seat)
5. Zahir: What. I'm typing.
6. (Claire leaves the book next to the monitor and takes the concept map)
7. Zahir: It's my turn.
8. Kieran: What?
9. Zahir: It's my turn. OK. What do I write?
10. (Claire is looking at the concept map, not answering Zahir)
11. Zahir: It's my turn!
12. Claire: Oh, men!
13. Zahir: Shut up!
14. (Claire starts typing)
15. Zahir: let me write.

In the previous communicative event, we can see how Zahir starts in turn 1 claiming that this is his turn to write, and demands an explanation from Kieran about what he is doing with a small whiteboard that they have in order to draft sentences before they type them in the computer. In turn 2, Kieran mentions that he is cleaning it, and adds a challenging remark to his answer as when he says: *"I'm cleaning the board, that's what I'm doing"*. In turn 3, Zahir reprimands Kieran reminding him that he is supposed to write questions in the whiteboard. While they are engaged in this discussion, Claire arrives in turn 4 and knocks gently on Zahir's back to try to recover the middle seat in front of the computer. In turn 5, Zahir challenges Claire's non-verbal request by reasserting what he is actually doing: *"What. I'm typing"*. Claire leaves aside the book she had in her hands and taking their concept map remains in silence while Kieran and Zahir discuss in turns 7-11 about whose is the turn to write. After Zahir shouts in turn 11 that it is his turn, Claire just exclaims in turn 12: *"Oh, men!"*, which I would suggest is her interpretation of a gender pattern of behaviour, as she is obviously speaking to two boys, not men. The discussion reaches a peak when Zahir shouts back *"shut up"*, and after that, Claire starts typing despite the insistence of Zahir in turn 15 asking to have a chance to write. It is interesting in this sequence how the discussion about the distribution of tasks takes most of the time that was supposed to be dedicated to write together a paragraph in their WebPage. Thus, it is possible to see how the focus on task has been affected and how it would be very difficult to conclude that they have managed to achieve a sense of a shared goal neither a shared agreement of how to proceed about it. Consequently, it is possible to consider the previous sequence as an example of lack of collaborative work. In contrast, the following excerpt provides a different interaction style with the same children in the same type of communicative event, writing a paragraph:

Transcript 10.2. Do We All Agree?

1. Claire: Do you want to type Kieran?
2. Kieran: Yeah.
3. Claire: OK. Do you want to swap over?
4. Zahir: No. Let me just write a little bit more.
5. Kieran: Let's do it! Stop.
6. Zahir: Let me just do one more.
7. Claire: Can I say something? Do we all agree that Kieran should have a go?
8. Zahir: Yeah.
9. Claire: I agree. OK then.
10. Zahir: Down here.
11. Claire: Can we swap places, cos he needs to get to the keyboard, doesn't he?
12. (they swap)
13. Teacher: What's going on guys?
14. Claire: We are swapping places cos we have just decided that Kieran should have a go.
15. Teacher: OK.

The event starts in a rather different way than the previous one discussed: instead of claiming a turn to type, in this case the event starts with an offering by Claire: "*do you want to type Kieran?*". Kieran accepts the offering in turn 2, and Claire goes further in her invitation by asking Kieran if he would like to swap over, in turn 3. However, in turn 4, it is evident that the one that is typing is Zahir, not Claire, and in that respect, Zahir asks for a little bit more time to do it. Kieran demands his turn in turn 5 ("*Let's do it! Stop*"), and Zahir reiterates his request to do just one more sentence in turn 6. Nevertheless, before the discussion continues Claire asks: "*Can I say something? Do we all agree that Kieran should have a go?*". By wording her first question in this way, she offers a dispreferred response, as usually participants do not ask permission to speak in

a conversation. In addition, this question is different to the fight for turns for writing, so that it is used for constructing the space for introducing a second question that is clearly referring to the use of the TTS: "*Do we all agree that Kieran should have a go?*". Claire's strategy seems effective since in turn 8, Zahir abandons his fight for continuing writing and is the first one to accept her request to give an opportunity to Kieran. Claire then agrees with Zahir in turn 9 and thus Zahir indicates to Kieran where he should continue typing: "*Down here*". After this, Claire asks to swap places, because Kieran "*needs to get to the keyboard, doesn't he?*". While they are swapping places in turn 12, the teacher approaches to ask about what is going on, and Claire reasserts that they have just decided that Kieran should have a go in turn 14.

By analysing this event, it is possible to see how time is spent more efficiently on task, as even when they are negotiating a change in the distribution of tasks, Zahir has continued typing. Additionally, it is possible to appreciate how a sense of group effort, inclusiveness, and 'democracy' is emerging in the event as questions such as "*Do we all agree that Kieran should have a go?*" have a consensual function within the group. Also, this question represents a clear invocation of the Thinking Together Skills as a cultural tool mediating the way this activity is carried out and linked to the politeness and easiness with which the group is dealing with the distribution of tasks. All of these aspects help to identify the event as one where an evident collaborative spirit is created within the group. Finally, what is interesting to note by comparing the two previous extracts is that division of labour was always there, the change resided only in the ways they proceeded to distribute the tasks. In this sense, collaboration was easier to achieve when a more 'rational' and polite style was adopted that helped on the emergence of common goals, a feeling of joint group effort, and therefore a more democratic distribution of power.

10.1.2 Empathy

This category refers to the invocations and references made about the willingness to be nice, friendly, fair, and/or helpful to others. Also includes the ability to share someone else's feelings or experiences by imagining what it would be like to be in their situation (e.g. Cambridge University Press, 2003). In addition, the analysis of the construction of this category by participants, which could be characterised as a disposition or a feeling, follows the remarks of researchers in discourse studies in which emotions can be identified as a social construction, as opposed to an internal state (e.g. Edwards, 1999). That is, participants do not only 'feel' empathy towards each other, but also construct and invoke this category in social interaction.

10.1.2.1 Interviews

During the interviews, I found some instances that invoke this category as follows in the next excerpt:

1. Manuel: OK. Erm, after all this project, that we've been working together, would you rather work on your own, or work in groups?
2. Albert: groups
3. Junhir: groups
4. Carlota: work in groups. Cos then you can get a little help from your partners; instead of just doing it on your own, cos you probably if you [got (.....)]
5. Junhir: [you don't know what to do...]
6. Carlota: then one other person, one other people, didn't know what to do, then is better to have a partner so that they can tell what to do, instead of doing it by yourself.

In the previous fragment, I started asking the children about whether they would continue working in groups or individually in the future. Turns 2, 3, and 4 presents the responses of the 3 children in this group arguing in favour of working in groups. More than the preference for group work itself, what is remarkable here are the reasons

provided in this respect. For instance, Carlota argues in turn 4 that by working in groups *"you can get a little help from your partners"*. Also, in the same turn, she seems to be trying to express why this is important, and Junhir elaborates that issue further in the next turn, in relation that help is important when *"you don't know what to do"*. Interestingly, Carlota then picks up this idea again in turn 6, where she reasserts in different words essentially what Junhir had just implied, that *"is better to have a partner so that they can tell what to do, instead of doing it by yourself"*. To be able to receive help, and therefore to be willing to provide it within group work, is a key issue being co-constructed in this conversation that provides some evidence of the relevance participants give to having an 'empathic orientation' towards each other. The next excerpt shows how not only help, but also friendship is an important constituent of empathy for the division of labour:

1. Manuel: OK. So, after working together all this time, erm, doing the WebPages, would you rather working in groups again or working on your own?
2. Lee: Working in groups
3. Basil: Working in groups
4. Monica: Working in groups, cos if you just did, done all yours it'll be like.
5. Basil: You got to change it
6. Monica: Or what's this, what's that. Shall I do this or that.
7. Basil: Cos she types really fast.
8. Monica: Cos if you are in a group.... You are doing the wrong spelling or something, they kind like back spacing, they kind like helping, you're helping everybody if you are in a group, it's a lot easier to get, get lot, lot more work done.
9. Basil: And everybody is got to take a part, because like when we did it, Lee and I were typing, and Monica was clicking with the mouse, and I was doing the reading, and sometimes I was doing the reading.

10. Manuel: hmmm

11. Monica: But mostly I done the reading cos it's hard for Lee to read so he mostly done the clicking and typing but me and Basil didn't mind cos we knew that's, he's not that very good at reading so me and Basil just took it in turns at reading and let Lee do something that he could actually do so it was kind of fair on him – like if we said read this and he couldn't read - we were friends so we just let him do what he can do.

At the beginning of this extract, I am asking them what they would prefer to do, working in groups or on their own. From turns 2-6 they start to elaborate an answer collaboratively, in the sense that they would work in groups, and highlighting the importance of this modality to be able to change things (e.g. *"You got to change it"*), and take decisions (e.g. *"Or what's this, what's that. Shall I do this or that."*). Then, Basil mentions how Monica *"types really fast"*, implying how distribution of tasks is determined by individual abilities contributing to the group. In this sense, Monica elaborates on Basil's remark by saying in turn 8 how important it is to support each other when, for instance *"you are doing the wrong spelling"* so the others are *"kind like back spacing, they kind like helping"*, and in general *"you're helping everybody if you are in a group"*. Similarly, Basil supports Monica's remarks in turn 9 by reminding, *"everybody is got to take a part"*, typing, clicking with the mouse, or typing. Finally, Monica explains further how this distribution of tasks was arranged, for instance leaving Lee to do the typing or clicking, because *"it's hard for Lee to read"*, but Basil and her *"didn't mind"* and *"took it in turns at reading"*. Thus, *"it was kind of fair on him"* because they *"were friends and let him do what he can do"*.

Therefore, it is important to see, on the one hand, how division of labour was not something neutral, but it was greatly determined by the differential abilities of the participants. On the other it is significant to see how important was to be fair and friendly with the ones that are not as capable as the rest. All of these aspects imply

characteristics of empathy, such as fairness, that were invoked by the participants as part of the interview.

10.1.2.2 Communicative Events

In the next communicative event, Kieran, Claire, and Zahir are exploring the sample WebPage I prepared about Victorian schools. At this stage of the session, both Claire and Zahir have been reading aloud several sections linked to the main page, such as “workshop schools” and “dame schools”. In contrast, Kieran has been a bit reluctant to participate, when suddenly Zahir proposes something:

Transcript 10.3. Sunday Schools.

1. Zahir: Hey, shall we have one go each to read it?
2. Claire: Yeah?
3. Zahir: Kieran, do you want to read it?
4. Claire: Do you want to read a little, we'll find a little piece for you?
5. (Kieran nods)
6. Zahir: Yeah, let's see, let's see, shall we see if there's...
7. Claire: there (pointing the screen)
8. Zahir: That's a little bit (pointing to the link about “Sunday Schools”)
9. Claire: You want to read, you want to read a little bit?
10. Kieran: Yeah. "At the...
11. Claire: End, (pointing the screen following the paragraph with the finger)
12. Kieran: Eh? end, of, the
13. Claire: Eightee...
14. Kieran: Eighteen
15. Claire: cen...
16. Zahir: century
17. Kieran: eh?
18. Claire: cen...

19. Zahir: century
20. Claire: cent, tu, ry (Claire moves her finger following the shape of the letters on the screen in the next turns)
21. Zahir: a
22. Kieran: A man called
23. Claire: Rob
24. Zahir: Robert De Niro
25. Claire: shh, ssh, ssh
26. Kieran: Ra
27. Claire: Rai, kes,
28. Kieran: What?
29. Claire: ssss
30. Kieran: saw, children,
31. Claire: what do we do in our site?
32. Kieran: playing
33. Zahir: in
34. Kieran: in the
35. Claire: street
36. Teacher: Right, can you stop... (voice from the teacher)

In this communicative event, Zahir starts by asking each to have a go at reading. In this sense, it is worth noting how this question is not followed by any answer but by subsequent questions in turns 2, 3 and 4 that seem to be trying to have Kieran accepting Zahir's initiative. In particular, it is remarkable how Claire phrases her question to Kieran in turn 4: *"Do you want to read a little, we'll find a little piece for you?"*, which implies to the effort that Zahir and Claire will make in order to help him, so that Kieran nods in turn 5. Then, after having Kieran's timid acquiescent response, from turns 6-9 Zahir and Claire starts to look for a *"little bit"* to be read by Kieran, so Claire repeats her

question to Kieran: *"You want to read, you want to read a little bit?"*, accenting her voice in an empathic manner. Hence, in turn 10, Kieran starts to read, but very soon he seems to have problems, and from that moment Claire starts to read in collaboration with him, prompting the sounds of the words (e.g. 13. Claire: *"Eightee.."*), and in many cases even following the shape of the letters on the screen with her own hands while uttering the corresponding sounds in segmented syllables (e.g. Claire: *"cent, tu, ry"*). Claire does this careful 'scaffolding' with him from turns 10-20, and then in turn 21, Zahir enters this activity by reading aloud the next word in the paragraph. Therefore, from turns 21-36 it is possible to see a joint reading task involving the three children, but with Claire and Zahir intentionally trying to support Kieran's efforts in this task. Additionally, it is also worth noting how Zahir's 'scaffolding' style tends to be more playful, such as in turn 24 where he is proposing *"Robert De Niro"* as a candidate for the name of the character written in this paragraph. On the contrary, Claire seems to be much more formal in her 'tutoring role', demanding more from Kieran in most of the cases, such as in turn 29 where she just voices the very first letter (e.g. 29. Claire: *"ssss"*) of the word *"saw"*, waiting for Kieran to identify and utter this whole word, and giving clues on how to guess the meaning of a word written in this paragraph. Remarkably, in both instances, Kieran is capable of identifying and read the corresponding words *"saw"* and *"playing"* in turns 29 and 32 respectively, after Claire prompted him.

Finally, I would argue that this communicative event would not have taken place without the firm intention of Claire and Zahir to help Kieran reading the paragraph in the WebPage. Thus, I would suggest that empathy, or the willingness to help another person based on the understanding of his/her situation, would be a key component to provide 'scaffolding' in any educational activity such as the one I have presented here.

10.1.3 Power / Knowledge

In this category, I will refer to the references that participants made in relation to the way knowledge was used as a tool in determining and deciding the division of labour in group work, and how consequently it was associated with power issues in the emergence of subject positions.

10.1.3.1 Interviews

The following extract presents the conversation I had with Ally and Jackie at the end of the interview, where I usually asked the children if they wanted to say something else in relation to the issues explored throughout the protocol. This is what Ally and Jackie mentioned:

1. Manuel: Is there anything else that you would like to say about the project or experience?
2. Ally: Well // well, what I actually asked Miss Clementine, but she said no, is that I want to stay in year 5 and do it all again next year, cos I really like it.
3. Manuel: Ah, I'm glad. What about you?
4. Jackie: um, um, well, Ally said that we'd do Charles Dickens because she thought that it was a good idea cos she knows a lot about Charles Dickens and I wanted to do Florence Nightingale cos I know loads about her, but she knows more, so we did hers.
5. Ally: I memorised, I even know his gravestone off by heart
6. Manuel: OK, anything else?

This part of the interview starts with my question about what they would like to add about the project. In turn 2, Ally mentions that she would like to continue doing "*it all again next year*", given that she really liked it. In turn 3, I extend the question to Jackie, and she responds in turn 4 that Ally wanted to do their WebPage about Charles Dickens because "*she knows a lot about Charles Dickens*". On the contrary, Jackie wanted to construct a WebPage about Florence Nightingale because she knows "*loads about her*".

Nevertheless, she also acknowledges that Ally "*knows more, so we did hers*". Thus, it is worth noting how they took the decision of what topic they were going to do based on the 'amount' of knowledge available to construct the WebPage. Finally, Ally confirms to what extent she is knowledgeable about Charles Dickens by saying "*I memorised, I even know his gravestone off by heart*" as if this expression would help to legitimise her power to decide and contribute on the WebPage based on the evidence she is providing at this point.

The following excerpt presents a section of the interview I had with Claire, Kieran, and Zahir. During the whole programme, it was evident that Claire was the one with more responsibility and/or access to the different tasks carried out to construct the WebPages. As evidence, I presented in the section about collaboration instances where even other groups of children recognised how 'difficult' was to work in this group, as stated by Ally: "*I wouldn't like to be Claire because I find it hard to put up with Kieran on his own, and Zahir on his own, and Claire had to put up with Kieran and Zahir. // together*". In addition, Mario, the technical officer, told me in several occasions how Claire was working on her own, left alone by Kieran and Zahir. In this sense, I wrote in an ethnographic note the following: "*I arrive [to where the group is working] (because I see her on her own, and Mario had also warned me about this), and ask her "where is the boy sitting here?" and Claire says, "he is in the toilet."*" Because of all of these aspects, I wanted to find out more about what made this group work in this way, so I pushed the issue further in the interview:

1. Manuel: OK. I see. So, who do you think was the one who worked more during this project?
2. Zahir: I think it was her (Zahir pointing Claire)
3. Manuel: Why?

4. Zahir: Because she does most of the writing and then on the board, more stuff too.
5. Manuel: Would you like to do more next time?
6. Zahir: Yeah.
7. Manuel: And why you didn't more this time?
8. Zahir: (after taking some time) Bec... I can't answer that question.
9. Manuel: Why?
10. Zahir: I don't know.
11. Manuel: Was it because the way you were organised to work, or was it because you didn't like to work on the WebPage?
12. Zahir: No I did like to work on it, but erm, we agreed that she is the cleverer than us, and she could do more writing, and she is faster than us too.
13. Manuel: So you decided to leave most of the responsibility to Claire. Were you happy with that decision?
14. Zahir: Yeah. Cos is...(in silence for a long time)
15. Manuel: What about you Claire? Were you happy with that decision?
16. Claire: Well I thought. I was a bit of that, but then I thought, if I'm going to do most of the work, then they are going to be sitting and left out, so I said, it was nice to say that, but I thought we should all have a go and it wouldn't be fair if I do it cos I know he likes to do things. So I said I'm not just working, everyone should do some, and not just leave it down to me. But it was a nice thing to say to me. But I thought everyone should have a go and doing it.

In this segment, I introduce the issue that I was interested in by asking, "*So, who do you think was the one who worked more during this project?*". In turn 2, Zahir immediately answers that he thinks, "*it was her*", while pointing to Claire. After my question of "*why?*" in turn 3, Zahir confirms that this is because Claire is the one who did "*most of the writing and then on the board, more stuff too.*" As I am interested in knowing about this distribution of tasks, I ask him in turn 7 why he did not do more this time. In this sense, it is interesting how he takes his time to utter a timid '*bec(ause)*', and then he

reconsiders his position by saying: *"I can't answer that question"*. Although in turn 9 I insist in my efforts to know the reason behind this division of labour, my strategy is not successful in getting Zahir to speak about it, as he mentions in turn 10: *"I don't know"*. However, I would suggest that both answers of Zahir in turns 8 and 10 were uttered in that way due to the highly emotionally charged content of the question in terms of the social positioning embedded in the issue explored. In this sense, answering to my questions seemed to be even a more difficult task in front of Claire, as any concrete response would imply either accepting, for instance, that he was lazy, or that Claire was domineering and controlling over the task, and that he was kept aside in many cases. In this way, in turn 11 I try to find out whether there was any lack of interest of his part on the task: *"...was it because you didn't like to work on the web page?"* As a result he immediately clarifies that he did like to work on the WebPages, but that the reason that they decided to work in this way was that *"we agreed that she is the cleverer than us, and she could do more writing, and she is faster than us too"*. Hence, it is quite revealing how he put forward this reason, which I would argue invokes Claire's knowledge superiority in different aspects such as intelligence, writing, and typing skills. This invoked superiority leaves Claire with most of the responsibility about the task, whether Zahir is happy or not about it, as is evident in turn 14 in his response to my question. In the end, enquiring Claire about her feelings in relation to this distribution of tasks, it is quite revealing how in turn 16 she puts forward the way she was trying to have a fair distribution of tasks: *"I thought we should all have a go and it wouldn't be fair if I do it cos I know he likes to do things"*, although she also accepts that *"it was a nice thing to say to me"*. In addition, Claire's intervention is interesting because of the reported speech features of this utterance where she seems to be reporting her 'internal dialogue' at that moment. That is, she reports her answer to what she was told (e.g. *"I was a bit of that"*), what she thought (e.g. *"if I'm going to do all*

the work", "*but I thought e should all have a go*"), and what she said (e.g. "*so I said, it was nice to say that...*", "*so I said, I'm not just working...*"). Thus, by reporting this internal dialogue, she is discursively presenting the dilemma in which she was involved at that time and the way she solved it, in order to account for her decisions that are stake as part of the interview.

10.2 Conclusion of the Activity Frame of Group Work

In this section, I discussed how in this study group work involved an intrinsic division of labour and how the distribution of tasks was informed by the categories of the participants. In this respect, 'collaboration', 'empathy', and 'power/knowledge' shaped the way in which group work was constituted, as I have illustrated through the analysis of several data sources such as the responses to activity cards, interviews, and communicative events, as part of a situated activity system (Goodwin, 1997; Säljö, 1995) where these categories were constructed.

Thus, in relation to the category of 'collaboration' I showed in my analysis how children conceptualised group work as something that involved a shared focus on task, the sense of having the same goal as a group, and the participation in activities that implicated a group effort. In this case, collaboration was something valued as a way to get things done by sharing information, although it also involved a sense of being selective about who they were working with. In this respect, I also showed how the "Thinking Together Skills" could be used as a tool to generate an orientation towards 'democracy', politeness, and inclusiveness within the group. However, I also argued how this democratic style did not imply the disappearance of the division of labour, but just a different way to distribute tasks, associated spaces, and artefacts.

In the case of the category of 'empathy' I showed how being helpful was an important aspect in group work. On the one hand, according to my analysis, to provide and receive

help implied the ability to understand the others' weaknesses, and to privilege friendship above differences in ability amongst peers, as an important aspect to distribute tasks. On the other hand, I also argued that 'empathy' implied the willingness to help a peer by attuning to his/her specific needs, and to 'scaffold' his/her way through a given task.

With regard to power/knowledge, I showed how this category was brought into play when children decided about how to proceed in a task. I suggested that skills and knowledge afforded privileged positions to the most "capable" participants within the activity, so that tasks could be distributed according to personal strengths or abilities.

To conclude, I found that group work was about collaboration, empathy, and power / knowledge, all of them social aspects of situated activity systems. Thus, given its social nature, I would argue that situated identities (Gee, 1999) were importantly informed by the positions of the participants within the activity, as the goal was not only about how to best organise group work or get things done, but also about the type of person students became as part of their participation. In this respect, the TTS helped them to create a balance for the power embedded in the situation, although sometimes they could also be invoked as bidding for agreement in order to decide about an issue based on a system of "majority of votes" in order to achieve consensus on a topic.

CHAPTER 11. CONCLUSION OF THE ANALYSIS OF THE ACTIVITY FRAMES OF DESIGN, HISTORY, AND GROUP WORK: THEIR INTERACTION IN A SITUATED ACTIVITY SYSTEM

In Chapters 8, 9, and 10, I have explored the different categories that pupils constructed in the literacy practice of the collaborative construction of WebPages in History. Using the analytic heuristic presented in Chapter 7, the construction of these categories were identified analysing different data sources such as responses to activity cards, concept maps, interviews, ethnographic notes and communicative events around the computer. In this respect, the role played by several cultural tools was analysed as part of a situated activity system (Goodwin, 1997; Säljö, 1995). Thus, I investigated to what extent the design principles, software (SiteCentral), concept maps, historical narratives, and the TTS were appropriated, mastered, transformed, and/or even resisted by the students, so that their mediational role could be evaluated as part of the activity system. More specifically, in accord to the research questions for this study (presented in section 5.6), in this part of the analysis I was interested in the categories that participants constructed in relation to the activity frames of a) design, b) History, and c) group work. As a result, next I present a graphic model of the situated activity system representing this literacy practice, as comprised by the different activity frames, the categories that participants constructed, and the cultural tools mediating its construction:

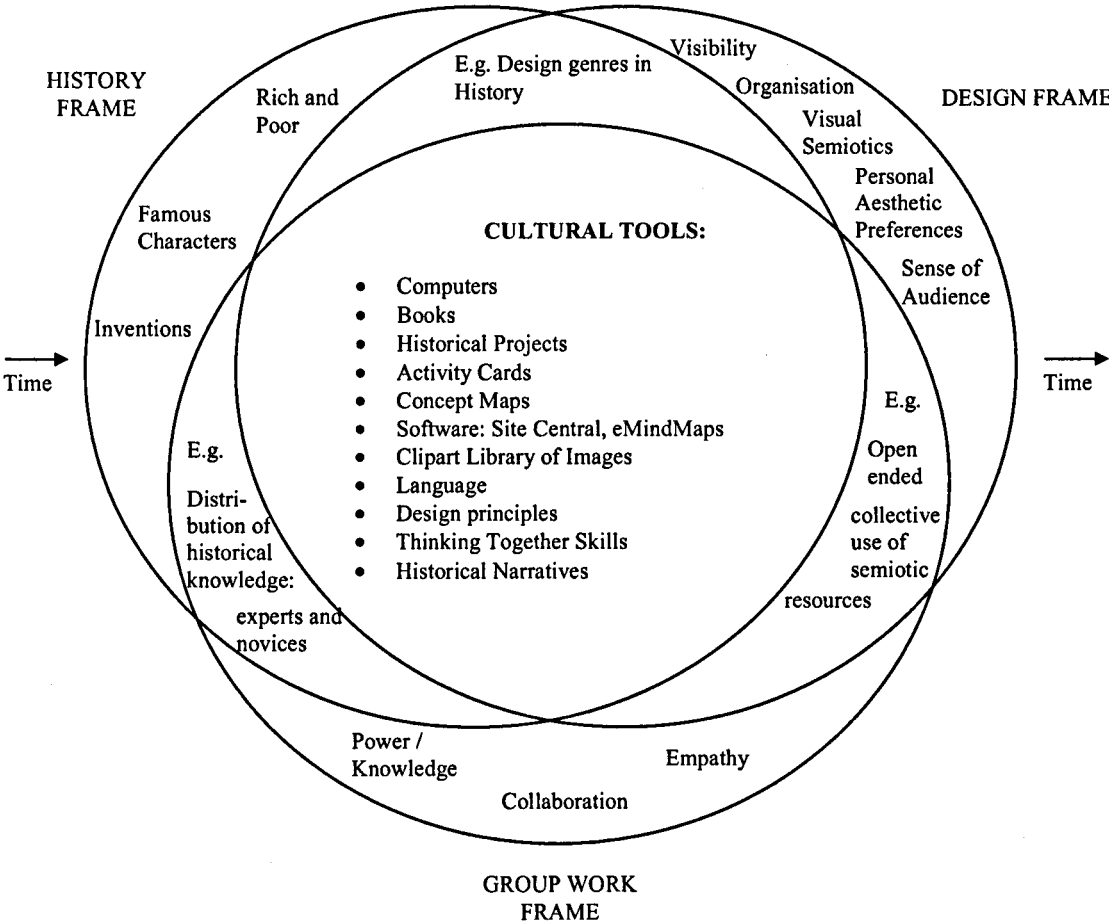


Figure 11.1. A graphic representation of the situated activity system for the collaborative construction of WebPages in History

In the diagram, it is possible to see three circles, each one representing an activity frame, constituted by the specific goals of this literacy practice that participants were pursuing. In section 4.1.7.4, I discussed how Goffman (1974) defined frames as “schemata of interpretation”, and “principles of organization” that are employed by participants to construct a particular definition of the situation, e.g. this is about “play”. Similarly, in section 5.6, I discussed how Goffman’s notion of frame is analogous to the concept of activity, following a sociocultural perspective (e.g. Leont’ev, 1981; Wertsch, 1998). Thus, frames indicate “what is going on” in a situation, adding layers of meaning that participants construct and interpret in social interaction. In the same way, activities

are defined by the pursuit of specific goals that are usually defined institutionally, so that the actions of participants realise different types of activities simultaneously (e.g. Wertsch, 1985b, p. 203-204). Consequently, using this analogy, I would argue that a type of goal determines a type of frame: e.g., “this is about designing”, “this is about communicating History”, “this is about working in groups”.

Also, in section 4.1.7.4, I discussed how the existence of frames afford the possibility of constructing and interpreting meanings that can only be understood in relationship to a given frame. In this respect, I have used the description of the relationship between frames and meanings to discuss how different frames afforded the construction of specific categories within the literacy practice of constructing WebPages in History. Thus, within each frame, it is possible to see the categories that participants constructed accordingly, which I mapped out in Chapters 8, 9, and 10: e.g. within the frame of ‘design’, participants constructed the categories of ‘visibility’, ‘organisation’, ‘personal aesthetic preferences’, ‘visual semiotics’, and ‘sense of audience’; within the frame of ‘History’, participants constructed the categories of ‘rich and poor’, ‘inventions’, and ‘famous characters’; within the frame of ‘group work’, participants constructed the categories of ‘collaboration’, ‘empathy’, and ‘power/knowledge’.

Given that actions of participants pursue different types of goals concurrently within a situated activity system (e.g. by choosing a background, pupils design their WebPage, show their interpretation of historical facts, and distribute tasks in group work), frames take place simultaneously as overlapping layers of meaning (Maybin, 1996a; Swann et al., 2004). Consequently, several intersections between the frames of ‘design’, ‘History’, and ‘group work’ can be observed in the diagram as well. In this sense, the interaction between the activity frames of design and History gives way to the emergence of design genres in History, as a patterned way to realise the communication

of History in multimodal electronic documents. The interaction between the activity frames of History and group work is represented by the distribution of historical knowledge between 'experts' and 'novices' in communicative events. Finally, the intersection of the activity frame of group work and design corresponds to the open-ended collective use of semiotic resources by participants within the activity system. Throughout the analysis, I made links to this "double-layered" situations, such as when I was discussing how children used particular genres for writing and designing in History, when pupils distributed tasks according to the different degrees of expertise they had in a given topic, and when they defended personal preferences and interpreted pictures, drawings, and backgrounds in multiple ways.

Additionally, at the centre of the diagram, I have placed all the cultural tools that were mediating the activity, as a representation of the materiality of the practice in which participants were engaged. That is, all the categories of the participants were constructed in use, mediated by these tools. Accordingly, I have discussed in Chapters 8, 9, and 10, how different tools mediated the construction of categories by participants. More specifically, I discussed how particular tools were designed for specific purposes, so that each of them had a specific mediational role for pursuing a goal within a frame. However, I also described how tools could have a 'secondary influence' in other activity frames. For instance, I argued that the TTS were designed for facilitating group work amongst pupils so that rational decisions could be made within a more democratic distribution of power. In this respect, the TTS had a direct impact on group work, and a secondary one on other aspects such as, for instance, the way knowledge was invoked or not to support claims in argumentative discussions about design and History. Similarly, the principles of design and the use of historical narratives were mediating the construction of categories in the frames of design and History respectively, and yet they had an impact on how group work was distributed and how collective actions were

interpreted. I am discussing these specific aspects, because although the literacy practice is a complex set of cultural tools, categories of participants, and interrelationships of frames, it is important to make evident that relations amongst all these elements can be complementary, but also partial, or even contradictory: e.g. sometimes designing requires the use of personal preferences that are not amenable to argumentation; sometimes it is adequate if a more knowledgeable student takes a leading role, even if this is not too democratic or symmetric; sometimes writing genres need to be challenged so that semiotic resources are treated in adventurous ways to design meaning, even if this is not too close to the conventions valued by a given community.

Having considered the possible interactions between frames as well as the possible relationships between the elements comprising the activity system, the teacher might use this graphic representation as a heuristic for action in literacy events. That is, based on the understanding of the activity system, the teacher might show pupils the most adequate tools to use in a specific situation, or the goals that need to be privileged in a moment where there is a divergence in the interpretation of what is going on. In other words, using the model of this activity system, the teacher could help the students to move towards more sophisticated forms of participation in a community of practice (Lave & Wenger, 1991; Wenger, 1999), where institutional discourses and other material tools are introduced and demonstrated by teachers and other more capable peers, so that participants are given the opportunity to interact with them in order to master and appropriate its use in situated practices (Säljö, 1997a). Also, Goodwin (1997) points out that the existence of a community of practice is a crucial aspect that needs to be acknowledged in order to understand the way participants construct categories, as they use their participatory roles as a motivational framework in which categories make sense. That is, categories can only be understood as part of the

participants' efforts to become more competent in the mastery and appropriation of cultural tools in a given community.

Finally, following Goffman (1961) and Goodwin (1997), Säljö (1995) has characterised a situated activity system as a "socially purposeful and situated activity which is maintained through practices that integrate physical tools and instruments, communicative (including cognitive) activities, rules, and traditions of participant roles and contributions, and criteria of success and failure" (p. 92). Although the way in which I have interpreted an activity system is consistent with this definition, I have also added the notion of 'activity frame' (Goffman, 1974) as a useful concept to analyse the relationship between cultural tools, types of goals, and categories of meaning, which otherwise may remain undifferentiated in such systems. Hence, by adding a frame analysis to the organization of the system, it is possible to facilitate its interpretation for changing practices.

Additionally, as well as Goodwin (1997), I have drawn on CA methods for analysing the way categories were constructed in social interaction, by referring to the sequential organisation of turns (Heritage, 2001; Schegloff, 1984) and the use of dispreferred responses (Levinson, 1983). However, I have also drawn on other discursive analytic strategies that are compatible with an ethnomethodological approach, such as the concepts of accountability (Potter, 1996) and positioning (Davies & Harré, 1990) derived from DP, the concepts of contextualisation and indexicality (e.g. 'invoking categories') derived from IS (Gumperz, 1999), and the use of reported speech (Maybin, 1996a, 1996b), in order to document how categories were socially accomplished. Moreover, I have also made links with the way communicative action constructed meaning in the design of WebPages, by drawing on the notion of genre from a SFL perspective (Coffin, 2000; Unsworth, 2001).

Thus, Goodwin (e.g. 1995; 1997) has demonstrated the mechanisms in which usually one category (e.g. 'black', 'muffin') is constructed by participants in action, using oral language, gaze and gesture. I have added to this analysis the responses to activity cards, concept maps and WebPages, as instances in which participants are also acting and constructing meaning in more than one category. Therefore, I am expanding the notion of action, as a unit of analysis, to the use of other semiotic resources, documenting more comprehensively the ways in which categories were constructed in different frames, and analysing the strategies of participants while they make sense of their efforts within the system. In this respect, I have shown the effectiveness of the analytic heuristic I proposed in Chapter 7.

CHAPTER 12. CONCLUSION

12.1 Introduction

In this chapter, I will bring together the main themes of the thesis. Thus, I will summarise and evaluate the main contributions of the studies reported in this dissertation, as well as the methodology developed for the analyses of results. Finally, I will describe the implications for educational practice, and will suggest directions for future research.

12.2 Main Themes and Contributions

12.2.1 Social Construction of Knowledge

This thesis began with a general interest in investigating how knowledge is constructed as part of social interaction, and how context, culture and language are intertwined in the way participants negotiate meaning and define the goals that they pursue. In order to tackle this general research aim, I drew on the literature developed in sociocultural theory, and in particular on the discussion of the emergence of situated approaches to the study of mind. Following this approach, I argued about the importance of providing an account of the conditions of production of situated actions, both at a societal and at a social level. Thus, the role of mediation of cultural tools was recognized as crucial for the analysis of the nature of learning, participation, and meaning construction. Accordingly, amongst the tools provided by culture, a predominant position was given to the analysis of language in use as the main mediational mean with which a shared understanding is established in dialogues which are part of situated actions.

12.2.2 Linguistic Variability

Given the prominence of the use of language as a cultural tool for constructing knowledge, one of the first aims of the dissertation was to establish how language use

varied according to the nature of the situation, and the dialogical orientation taken by participants in order to achieve a certain goal. In this respect, I investigated the way a small group of children used language in order to solve a set of matrices from the RSPM test. Drawing on the concepts of exploratory, cumulative and disputational talk, I elaborated an analytic scheme which was used to examine the way children talked while tackling each of these matrices. Thus, I found that children used cumulative talk in the easiest matrices; they used more exploratory talk in the matrices with a medium degree of difficulty, and a mixture of styles with the appearance of disputational talk in the most difficult problems. The findings are important because they show how children adjusted their way of talking according to the degree of difficulty of the problems being tackled, so that their use of language demonstrated the creation of a 'Zone of Proximal Development' in the problems where a more elaborate consideration of the features of matrices was required. In other words, children were economical and strategic in their use of language, using exploratory talk only when the task was relatively understood by all participants who clarified some aspects for constructing a shared understanding. They economised in explanations when such a shared understanding was easily established, and finally, they avoided discussing the features of the matrix or guessed the answer when none of the participants understood the problem at stake.

Following these results I would suggest that the concept of exploratory talk should be treated with care, avoiding normative judgements about what is considered productive from the point of view of the analyst, who might expect to see it in all dialogues if the perspective of participants while using language and establishing shared understandings is not fully understood. In other words, the use of language by participants needs to be analysed in accordance to the conditions of production of the situation to which participants adjust their talk in order to make sense of their own actions.

12.2.3 Literacy and ICT

A second way in which I investigated linguistic variability was in relation to the situated way in which a group of pupils and their teacher used language for constructing a range of electronic documents. In the analysis of the practice of constructing e-mails, and the practice of constructing WebPages I found differences about how language was used to talk about texts. For instance, I found events in which participants discussed the construction of e-mails and WebPages in a literal and 'fixed' way, as opposed to events in which they had a more interpretative approach towards the production of texts. In the first case, texts were produced without taking into account the design of a message for a particular audience. Also, while constructing e-mails and WebPages, participants seemed to avoid discussing the referential nature of the meaning of a text. In the second case, texts were contextualised in relation to the efforts of participants trying to follow conventions which are valued and understood by a real audience to whom they were communicating. In addition, while constructing e-mails and WebPages, participants recreated cultural ways of writing and designing which informed the way they talked about texts in situated events. Thus, I argued that the quality of interaction and of these documents was better in the second case, which I related to a cultural practice privileging contextualization of conventions and sense of audience.

Finally, summing up the findings of the two pilot studies, and following Mercer (2000), I argued that the concept of Intermental Development Zone could be a useful resource for analysing the discursive strategies followed by participants for constructing shared understandings. Because of its focus on the goal-directed nature of social interaction, the mutual generation of actions and shared contextual frameworks, as well as its emphasis on the notion of appropriateness of language use, I argued that the IDZ is a comprehensive concept for considering language use from the perspective of participants engaged in situated actions. Nevertheless, from the experience gathered in

the pilot studies, I also found that I needed some extra methodological resources in order to study language in use, as informed by the characteristics included in the definition of IDZ. Consequently, this search led me to the concept of communicative competence, and to the ethnography of communication, which I discuss next.

12.2.4 Communicative Competence

While I was finishing the analysis of the pilot studies, I could corroborate the importance of documenting the conditions of production of situated activities (discussed in Chapter 2) for understanding the way participants made sense of their actions and used language accordingly. In this respect, in the main study I chose to use the ethnography of communication as the main approach to define my units of analysis in terms of 'communicative events'. Then, by studying the relationship between communicative events, acts, and situations, I analysed the communicative competence of participants while they were engaged in the collaborative construction of WebPages in History. Thus, drawing on this approach I provided evidence of how the use of deictic terms in context, the existence of cultural patterns, the emergence of division of labour in group work, and the intrinsic collaborative nature of the construction of meaning, were important aspects in the conformation of communicative events. Consequently, I suggested that the use of 'exploratory talk' would need to be evaluated along these other features that also need to be mastered by participants as part of their communicative competence. In other words, following Hymes (1972b), I argued that it is important to analyse the way participants construct knowledge and make their reasoning visible in the talk taking into account what is possible, feasible, and appropriate in a given communicative event.

12.2.5 Analysis of Categories and Activity Frames

As part of the main study, I also investigated the way participants constructed categories in different activity frames within a situated activity system (Goodwin, 1997; Säljö, 1995). Drawing on the ethnography of communication and a range of discursive analytic strategies such as CA, DP, IS, and SFL, I documented the ways in which participants constructed categories in each activity frame, and the cultural tools mediating their construction. Thus, I assessed to what extent a set of cultural tools were appropriated, mastered, transformed, or even resisted, as part of the situated activity system for constructing WebPages in History. By doing this, I produced an inclusive analysis of this situated activity system drawing on several data sources, as well as documenting a comprehensive set of categories constructed within each frame investigated. I also discussed how frames were interrelated giving way to “double-layered” situations, as instances of the way in which culturally mediated actions can realise simultaneously different types of activities that are part of the same system. In this way, I documented the use of design genres in History, the open-ended collective use of semiotic resources, and the distribution of historical knowledge in experts and novices. Finally, I highlighted how the pursuit of goals in different activity frames can not only be complementary, but also partial or even contradictory (see Chapter 11 for an elaboration of this).

In summary, this dissertation has contributed to the understanding of the way participants construct knowledge in social interaction. This has been achieved by carrying out two pilot studies and one main study in which the conditions of production of communicative events were analysed in relation to: a) the existence of linguistic variability, b) the connection between situated events and cultural practices, c) the

relationship between the concepts of exploratory talk, Intermental Development Zone, and communicative competence, and d) the construction of categories within activity frames in situated activity systems. In addition, the focus on the collaborative construction of WebPages by primary school children in History illustrated the affordances of cultural tools and the strategies taken by participants while using them, so that the resulting understanding of the complexity involved in this type of practices can be used to inform the improvement of educational practices, as I will discuss in section 12.4.

12.3 Methodological Issues

I have discussed the ways in which I approached the study of language to understand how participants constructed knowledge in situated actions. In this section, I will consider in more detail the issues involved in the methods I developed in this dissertation.

12.3.1 Discourse Analysis and Ethnographic Tools

In Chapter 2, I discussed how from a sociocultural perspective, language is the main tool for constructing knowledge. More specifically, in pilot study 1, I followed the three types of talk identified by Mercer and Wegerif (e.g. Mercer, 1995; Wegerif & Mercer, 2000) in order to analyse language in use in the context of the solution of matrices of the RSPM test. In pilot study 2, I moved to a more descriptive analysis of talk in literacy events by drawing on Heath's (1983) findings in relation to the way participants can either a) not discuss texts, b) discuss them in a literal sense, or c) discuss them in relation to the context of the situation, interpreting its meaning in a relational manner. However, in order to have a wider picture of the strategies that participants followed for constructing knowledge in social interaction, for the main study I decided to discuss the different approaches to discourse analysis and sociolinguistics that have addressed this

issue. Drawing on this revision, in Chapter 4 I identified the ethnography of communication as a useful starting point for the research questions I was pursuing in the dissertation. Thus, the unit of analysis that I used in the main study, the communicative event, was defined theoretically and empirically following the early work of Hymes (1972a) and Gumperz (1986), and more recently Saville-Troike (2003). However, once I defined the unit of analysis, its examination for providing an account of the conditions of production of the literacy practice of constructing WebPages in History was still a challenge. In this respect, I resolved this issue by analysing on the one hand the relationship between communicative events and acts, drawing on my interpretation of Hymes's components of communicative acts in order to identify the role of context, cultural patterns, division of labour, and collaboration in communicative events (see Chapter 6). On the other hand, I analysed the relationship between communicative events and situations, by elaborating a heuristic using different ethnographic tools in order to document the categories that participants constructed in three particular activity frames: design, History, and group work, as part of a situated activity system. The way I drew on different discursive analytic strategies in order to provide evidence of the way categories were constructed by participants from their own point of view, required a deep understanding of the participants and of the situated activity system in which they were engaged. As a result, the warrants for the validity of my analyses are grounded on the evidence I have presented, the theoretical links I have established in each case, and on my own knowledge as a participant observer. This is the challenge I have faced while dealing with the data that I have collected while constructing an account of the events that I witnessed. In this respect, I have done my best to provide all the evidence I gathered for the analyses presented in this dissertation.

Finally, the model I presented in Chapter 11 suggests that anybody trying to analyse classroom talk needs to be aware of the complexity of the phenomenon under

investigation in order to provide a comprehensive solution to this challenge. According to this model, anybody focusing on a single aspect without providing an account of the interaction of context, culture, and language use in situated actions, is very likely to miss the whole picture. In this respect, I have tried to propose a solution to the analysis of this complexity by developing the methodology I have just described, so this is also a contribution of this dissertation.

12.3.2 Software for Qualitative Data Analysis

As part of the efforts to systematise the data collected, I started to use NVivo (QSR International, 2002). My first attempts to make sense of the data using this tool started in November 2001, while I was inserting the first transcripts of interviews with the children, and refining my ethnographic notes with transcripts of talk around the computer in communicative events. It took me about 2 years and a half to develop a full coding system with units of analysis, categories, and frames, as well as organising the material that I used to write this dissertation in a gradual, yet non-linear way. However, now that the data has been inserted in the project, and an initial coding system has been established, it is easier to try to answer other research questions by accumulating more evidence and refining the analysis in the direction of interest. For instance, I have data that I still could analyse in terms of construction of situated identities, and the important role of teacher in shaping the way activities took place (I will elaborate on this in section 12.5). Thus, I would suggest that without the use of this software I would not have been able to systematise the data up to the level required for answering the research questions that I pursued in this dissertation, neither for continuing working in other related problems of investigation in an efficient manner.

In addition, the way in which I used NVivo for this dissertation is unique in the sense that I have developed a method for analysing situated activity systems, identifying

activity frames and categories of participants, by handling multiple data sources and layers of meaning within such system (see Chapters 5, 7, and 11). Thus, although NVivo is designed for the management of complexity in non-structured data, my approach is a contribution to educational research and discourse analysis from a sociocultural perspective, which I hope can be used for future research projects.

12.3.3 Data Collection Issues

After having concluded the analysis for the dissertation, I have identified several issues that I would change if I had the chance to do it again. For instance, first I would video-record the activities and talk of children around the computer using a video-mixer to combine the signal coming from the video-camera recording their interaction, with the signal coming from the actions taken in the screen in real time. I noticed that given that I collected these data sources independently, it took me a lot of time to integrate them in order to make sense of the pupil's talk referred to elements in the screen. However, this integration proved to be indispensable in the analysis given the importance of deictic terms referring to actions taking place in a fast way in the construction of WebPages (see my discussion in this respect in section 6.3).

In addition, this process would have allowed me to collect all the integrated data in a digitised format, with two additional advantages. First, digitised data can be linked with an NVivo project through the incorporation of audio and video files into the data set, which then can be related to transcripts or coded as part of a given category, facilitating its analytical treatment. On the other hand, digitised audio files can be used in much more accurate ways with programmes such as Transana (Fassnacht & Woods, 2003) to make more detailed transcripts which then can be used for the analysis of contextualising cues that in many instances are only identified by the pauses taken by participants measured in seconds, or by the change in intonation that can be pin down

more easily with this programme which can even represent these changes graphically in audio waves.

Finally, I would have made a second interview session after having elaborated the first transcripts, to clarify further my interpretation of certain utterances and ways of using language that I found interesting, although quite brief or unclear to make a substantial analysis. For instance, I documented the use of several small narratives, anecdotes, and intertextual references which I could not fully understand in many cases as I had not been a participant in such accounts. Nevertheless, they revealed many interesting and subtle aspects of their own cultural life as pupils attending school, and as family members interacting at home, which would have been valuable to incorporate into the analysis.

12.4 Implications for Educational Practice

12.4.1 Task Competence vs. Communicative Competence?

On the one hand, the way in which I analysed the use of language in social interaction highlighted the strategies that participants followed to communicate with each other about the task. In this respect, I found that pupils were quite competent in the way they dealt with conversations, taking turns and negotiating meaning, showing to each other an understanding of what was going on in a given situation, and recognising the various issues that were at stake in dialogues. They only had a small number of misunderstandings and went through just a few moments in which temporary puzzlement required clarification. However, on the other hand, I found that in relation to the task, children were not as competent in the task of constructing WebPages, as considered necessary in the National Curriculum. In particular, in the activity frames of design and History, children were not very capable of using the multimodal semiotic resources they had available for recreating historical genres in order to assess the nature

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of historical narratives corresponding to the significance, causation, or continuity and change of past events. That is, the way they designed their WebPages on the whole reflected the reproduction of official historical narratives, with little evidence of transformation of knowledge, and comprising mostly descriptions of facts. Pupils did not include moves in their multimodal documents making a critical evaluation of the wider societal conditions of Victorian lifestyles, its impact in the production of numerous inventions in a relatively short period of time, and/or the significance of the life of famous Victorian characters in different areas of human activity in present times.

As a result, I would argue that it is possible to observe a mismatch between the communicative competence of students and the competence for carrying out the task of constructing a WebPage in History. This would imply that in order to improve the quality of the design of their WebPages, students would need to learn a different genre for communicating History in a more critical way. This would require them to identify how to use different semiotic resources for realising meanings according to the moves needed for a less reproductive and more transformative treatment of historical knowledge. Incidentally, the improvement of 'task competence' would have an impact in the communicative competence of students, who would not only be able to participate competently in a conversation, but to do it paying attention to the design conventions required for a more critical multimodal communication of historical knowledge. Thus, in this case, it might be possible to talk about a 'double' communicative competence if we take the task of designing multimodal electronic documents as a dialogic task of engagement with an audience who will read these documents, along with the communicative competence for establishing a dialogue between peers to discuss the design of WebPages according to certain cultural conventions.

12.4.2 The Role of Teacher

In the data collected I gathered evidence about the significant role of teacher in modelling the way cultural tools needed to be used, including importantly the TTS, the design principles, and the historical narratives mediating the construction of their WebPages. Thus, I coded several types of teacher-led plenary sessions such as “plenary design”, “plenary History”, “plenary group work”, “plenary task”, etc., as well as other events in which the teacher ‘scaffolded’ several aspects of the task carried out in small groups, which I coded as “scaffolding TTS”, “scaffolding SiteCentral”, “scaffolding design”, etc.

I have carried out a preliminary analysis of some of these events, in particular in relation to “plenary tasks”, in which I found that students were recruited by the teacher into the ‘figured world’ (Holland et al., 1998) of web design, playing at being famous web designers and reviewers being interviewed in television game shows¹⁰. By creating this fantasy-like activity frame, students had an opportunity to display their skills and knowledge as web designers, revealing the mastery and appropriation of the cultural tools available in the situated activity system in which they participated. This and other data that I collected in relation to the participation of the teacher in the main study are worth exploring in more detail as this reveal a set of strategies that the teacher put in practice to transform the participation of her students in the literacy hour into an authentic engagement with a community of practice where learning was linked to the shifts of participation roles taken by students in this community.

Finally, as I argued in Chapter 11, the model of the situated activity system that I constructed through my use of NVivo, could be exploited by the teacher to identify areas of competence in which students need to master and appropriate different cultural

¹⁰ This analysis is described in Fernandez (2003a), presented in EARLI 2003.

tools according to the pursuit of multiple goals in practice. Consequently, the teacher can plan and adjust her/his intervention in order to meet these objectives in a more comprehensive way, informed by the complexity of cultural tools, categories and activity frames, illuminated in this model.

12.5 Further Research

12.5.1 Societal Conditions of Production

In this dissertation, I claimed to be interested in identifying the conditions of production of situated actions in relation to computer supported literacy practices, and in particular to the practice of constructing WebPages in History. In this respect, I have focused on the relationship between categories and frames to provide an analysis of the conditions of production of meaning in literacy events. As a result, I have enriched the concept of ‘situatedness’ by illuminating the different layers of meanings in situated actions. However, although in my analysis I revealed some links between events and cultural practices, I did not have the opportunity to document in more detail the institutional life and societal rules of the school in which the study took place, neither to study the characteristics of the community to which the children belonged, which included an important percentage of Bengali, Indian, and Pakistani families. The impact of these wider conditions of production, located in a societal level, is also worth pursuing in further studies.

12.5.2 Identities

I have discussed in the dissertation instances where the use of cultural tools afforded different subject positions. In addition, while analysing the participation of students in plenary sessions such as the one I discussed in section 12.4.2, I have also documented

how participants assumed figured identities of web designers and web reviewers¹¹. These aspects of social interaction have been explored in the form of situated identities by Gee (1990; 1999) and also in relation to the shifts in participatory roles in communities of practice by Lave and Wenger (Lave & Wenger, 1991; Wenger, 1999). A more detailed analysis of the identities that result from the participation of students as part of their engagement in the practice of constructing WebPages is also worth pursuing. After all, as I mentioned in section 2.4.2, following the Scollons (1981), there is little more important than the ways in which we use language in oral and written form shaping our identities in such a transcendental way.

12.5.3 Communicative and Task Competence

The issue of the relationship between communicative and task competence are worth exploring further. One possibility to do this is to distinguish between the effects produced by the training in exploratory talk and a more dedicated training following a 'genre' approach. This also would be helpful to explore the links between oracy and literacy, which are not usually investigated within a 'genre' approach as the textual aspects are privileged over the interactive aspects around them. Moreover, the study would be useful to investigate the links between communication and practice, which from a radical dialogical perspective would tend to be conflated in situated actions, although I would suggest that the relationship between both is not simple, as I discussed in section 12.4.1. Thus, it is worth exploring these issues in more detail in order to inform the improvement of educational policy, the training of educational practitioners, and the design of didactic materials for computer supported literacy practices.

¹¹ This analysis is also described in Fernandez (2003a).

Chapter 12 Conclusion

In summary the issues that I explored throughout the dissertation represent a contribution to the growing body of evidence about the role of culture, social interaction, and language use in computer supported literacy practices, which are worth continuing exploring with a multidisciplinary approach, including researchers from fields as diverse as anthropology, linguistics, sociology, psychology and education.

APPENDIX 1

Design Principles for a Web Page

- I. Choose backgrounds and pictures according to the aesthetic standards of Victorian times. For example, Victorians liked wallpaper with patterns based on flowers, plants and birds, so you might use similar patterns for a background. Also, Victorians liked to take photographs with cameras that were just invented at that time. As all the photographs from that period were taken in black and white, you might want to use some of the examples found in the tabs of SiteCentral.
- II. Sometimes, it is not easy to find exactly a Victorian picture or background. If you don't find them, then you may use other elements who does not contradict the graphic representations of the situations of the Victorian times (e.g. don't put a PlayStation video game representing the "spare time" section)
- III. Use colours for the fonts that can contrast with the background. For example, if the background is green, you can use red fonts, if the background is purple, you can use yellow fonts; if the background is orange, you can use blue fonts.
- IV. Choose a font according to the Victorian aesthetic standards. The typewriter was invented in 1867, so Victorians liked to write with this new device in fonts similar to the ones we use more frequently in our word processor, like **Times New Roman** or **Courier New**, but also some other like Cottage or Jupiter. However, they used to have a lovely handwriting like this, when they wrote personal letters and reports by hand.
- V. Whenever you write something in the page next to an image, they have to be related to each other meaningfully, by having the text explaining what you can see in the image, and the image representing what is written.
- VI. Try to present an organised menu of choices or links for the reader to have an overview of what can he or she finds in the site.

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